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# Child Development Abstracts & Bibliography

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## *Abstracts of Articles*

### **MORPHOLOGY**

**284. ALTEMUS, L. A. Frequency of the incidence of malocclusion in American Negro children aged 12-16.** Angle Orthodont., 1959, 29, 189-200. Based on 3289 children in 4 junior and senior high schools of Washington, D.C., with permanent dentitions and who had received no orthodontic care. Malocclusion was assessed in two ways: (1) counting of teeth out of normal occlusal alignment; (2) classification via the Angle system. It was found that 83% had malocclusion, 4% had "ideal" occlusion, 13% had "normal" occlusion. This compares with white children: 80%, 3%, 17%, respectively. There are fewer maloccluded teeth per child in Negroes, i.e., 6 per child as against 10 per child in whites. In the Angle classification Negro children have fewer Normal, Class II, Division 1, and Class III malocclusions. —W. M. Krogman.

**285. BAMBHA, J. K., & VAN NATTA, P. A longitudinal study of occlusion and tooth eruption in relation to skeletal maturation.** Amer. J. Orthodont., 1959, 45, 847-855. After careful statistical analysis it is concluded that malocclusion does not occur more frequently in maturational laggards, nor is there more severe malocclusion when it does occur. There is no correlation between times of tooth eruption and skeletal maturation or between tooth eruption and severity of malocclusion. —W. M. Krogman.

**286. BOWKER, W. D., & MEREDITH, H. V. A metric analysis of the facial profile.** Angle Orthodont., 1959, 29, 149-160. Based on lateral head-films, 26 girls, 22 boys, native-born American white, at age 5 and at age 14. Bony landmarks nasion, pogonion, tuberculum defined; lines na-pog and na-tub drawn. On na-pog horizontals drawn to soft tissue: root of nose, tip of nose, concavity upper lip, labiomental groove, chin prominence; vertical distances between these lines measured; angle pog-na-tub measured. Data are discussed in terms of associations integumental profile at 5 and at 14 years. —W. M. Krogman.

**287. CALDEN, GEORGE (Veterans Admin. Hosp., Madison, Wisconsin), DUPERTUIS, C. WESLEY, & LEWIS, WILLIAM C. Body types and tuberculosis.** Psychosom. Med., 1959, 21, 460-472. Medical opinion, from the days of Hippocrates to the present, has associated tuberculosis with individuals having a thin, long ectomorphic bodily frame. This "habitus phthisicus" has been suggested by some writers as contributing to a lack of resistance among individuals who develop tuberculosis. Others have maintained that this body type is a resultant of biochemical factors which make certain people prone to tuberculosis in ways independent of their physique. The aim of this study was to investigate the relationship of body type to tuberculosis by using reliable somatotype procedures (in contrast to the faulty techniques for measuring physiques employed in the past). 400 patients admitted consecutively to a Veterans Hospital for pulmonary tuberculosis were photographed for somatotype evaluation according to Sheldon's method. Each patient was rated for degree of endomorphy, mesomorphy, and ectomorphy as well as for the secondary g, t, asthenic, dysmorphic, and dysplastic components. Analysis of the data revealed that mesomorphy and endomorphic-mesomorphy were the predominant body characteristics of half the patients, whereas only 14% of the subjects displayed the thin, narrow ectomorphic physique which traditionally has been associated with

tuberculosis. The somatotype distribution of the tuberculous subjects also did not appear to differ significantly from that of a large sample of nontuberculous adults. The morphological characteristics of the tuberculosis patients for the secondary components similarly did not reveal markedly different trends from normal groups. Clinical impression of the data, however, suggests that tuberculosis patients may be uniquely endowed with "asthenic" (weak-looking) bodily qualities. The alleged relationship between body build and tuberculosis in the past has been attributed by the present authors to a confusion between weight loss or emaciation that may have developed as a consequence of the disease and the fundamental physique which existed prior to the onset of the illness. As a result of using a somatotype procedure that can reliably classify physique despite fluctuations in weight, the alleged positive relationship between a particular variety of physique and tuberculosis does not appear to exist. —Authors' Summary and Conclusions.

**288. COCCARO, PETER J.** (Nat'l Inst. Hlth, Bethesda, Md.) **A serial cephalometric study of the growth of the soft palate in cleft palate children.** Paper read at Amer. Ass. Cleft Palate Rehabilitation, May, 1959. This study was designed to answer the following questions: (1) at birth, is the soft palate in children with clefts shorter than in children with normal palates? (2) Does the pattern of growth of the cleft soft palate differ from that observed for the normal soft palate? (3) Utilizing the above information, try to determine what effect palatal surgery may have had on velar length and the growth pattern of the soft palate in cleft palate children? (4) How do nasopharyngeal vertical and horizontal measurements in cleft palate groups compare with those observed in the normal? The data selected for this investigation was derived from the serial growth study in continuing progress at the Cleft Palate Center of the University of Illinois. From this collection 57 cases, with various cleft types were selected and serial lateral cephalometric films were analyzed. The technique employed in obtaining these films has been described by Pruzansky and Lis. Linear measurements were employed to determine velar length, nasopharyngeal height and depth in this investigation. For controls, comparisons were made with the normative data on the growth of the soft palate as reported by Subtelny. At birth, the soft palate in children with clefts is shorter than those recorded for children with normal palates. The growth pattern for velar length in cleft palate children when compared to children with normal palates reflected a discernible parallelism between the two growth curves. Analysis of the data indicated that there was little, if any, significant effect of palatal surgery upon the growth pattern and the length of the velum in cleft palate children for the period studied. Shorter horizontal and vertical nasopharyngeal measurements were observed for the cleft palate group when compared with the normal for the period studied. —(Cleft Palate Bull., 1960, 10).

**289. GARN, STANLEY M., & HASKELL, JOAN A.** (Fels Res. Inst., Yellow Springs, Ohio) **Fat and growth during childhood.** Science, 1959, 130, 1711-1712. Fat thickness, size, and maturity status are significantly correlated from 1.5 through 11.5 years in both sexes. Children who are fatter than their contemporaries at 8.5 to 9.5 years reach menarche earlier and complete epiphyseal union sooner. —Abstract.

**290. GREULICH, WILLIAM WALTER.** (Stanford Univer., California) **Value of x-ray films of hand and wrist in human identification.** Science, 1960, 131, 155-156. As seen in the x-ray film, the individual bones of the hand and wrist differ sufficiently in form from one person to another so that such films can be valuable aids in establishing personal identification in either the living or the dead. —Abstract.

**291. MOORE, A. W.** **Observations on facial growth and its clinical significance.** Amer. J. Orthodont., 1959, 45, 399-423. Facial growth sites are given as follows: (1) vertical plane of space-frontal process, maxilla, maxillary and mandibular eruption, mandibular condyle (position plus vertical growth); (2) horizontal plane of space-maxillary tuberosity, a-p position of pterygoid plates, mandibular condyle (position plus horizontal growth). In lateral head films these loci were studied via 3 methods of registration: cranial base ("over-all method"); maxilla; mandible. Nine

case-histories are discussed, 4 of normal occlusion, 5 of class II malocclusion (retusive mandible). The follow-up studies on these children cause Moore to question "the constancy of the facial growth pattern" as a working concept. It is not so much horizontal or vertical growth, per se, that are important in orthodontics, but rather growth in terms of "individual bone morphology, bone interrelationships, and differential growth rates." It is averred that "these three phenomena are interdependent." —W. M. Krogman.

**292. SEIDE, L. J. The relationship of dentofacial growth and skeletal maturation to malocclusion.** Amer. J. Orthodont., 1959, 45, 801-816. Skeletal age in orthodontic patients was determined by use of the Greulich and Pyle "Atlas" (1950 ed.). Two case histories are presented, and a comparison between bone age and X-ray cephalometric analysis is offered. The author concludes that "the proper assessment of skeletal maturation is a positive factor in dentofacial growth and development and cannot be separated from dentofacial growth." A complete medical, dental, genetic history should be secured to assay the effect of exogenous factors. In planning orthodontic treatment, skeletal maturation and dentofacial growth should be carefully evaluated, in terms of extent or degree of deviation from the norm. —W. M. Krogman.

**293. SUBTELNY, J. D. A longitudinal study of soft tissue facial structures and their profile characteristics, defined in relation to underlying skeletal structures.** Amer. J. Orthodont., 1959, 45, 481-507. Based on serial head X-ray films of 30 persons, 3 months to 18 years of age. In growth both the bony and integumental chins moved forward relative to the cranium. The integumental chin was closely related to underlying bony prognathism. Bony facial profile became less convex with age, while soft tissue profile became more convex. To a degree total bony growth and total soft tissue growth are slightly independent. Both upper and lower lips increase in length with age, and after full eruption of upper incisors the upper lip is fairly constant in relation to prosthion and maxillary incisal margin; in like manner lower lip is related to infradentale and mandibular incisal margin. The a-p position of the lips is closely related to the teeth and their alveolar processes. —W. M. Krogman.

## PHYSIOLOGY AND BIOCHEMISTRY

**294. ABRAHAMOV, ABRAHAM, & DIAMOND, LOUIS K. (Harvard Med. Sch., Boston, Mass.) Erythrocyte glycolysis in erythroblastic newborns.** Amer. J. Dis. Child., 1960, 99, 202-205. It has been demonstrated that the blood of infants with erythroblastosis due to Rh incompatibility has a significant decrease of both oxygen carrying capacity and glycolytic rate. These phenomena could be reproduced in artificial mixtures of Rh-positive cells and anti-Rh antibodies incubated at 37 C for 15 hours. Neither of these effects occurred from incubation of Kidd-positive red cells with Kidd antibodies for 15 hours. Nor did either effect occur from exposure of red cell to bilirubin in the absence of antibodies. —Authors' Summary.

**295. BORGSTRÖM, BENGT, LINDQUIST, BERTIL, & LUNDH, GÖRAN. (Göteborgs Univer., Sweden) Enzyme concentration and absorption of protein and glucose in duodenum of premature infants.** Amer. J. Dis. Child., 1960, 99, 338-343. The trypsin and amylase concentration and the absorption of protein (RIHSA) and glucose have been studied in 10 premature and 5 full-term infants by collecting duodenal contents during digestion of a test meal. Young premature infants (about one week of age) have a decreased concentration of trypsin and no sign of a pancreatic response in comparison with older infants (14-30 days of age). The protein absorption seems to be almost the same in duodenum in spite of this difference in enzyme concentration. No difference in amylase concentration was seen between the premature and the full-term infants investigated. It seems possible that the amylase

in duodenal content of infants originates from the saliva. The results do not support the idea that premature infants should be fed hydrolyzed proteins. —Authors' Summary.

**296. BOWMAN, HERBERT S.** (Harrisburg Hosp., Pennsylvania) **Hematopoietic responses to iron-dextran.** *Amer. J. Dis. Child.*, 1960, **99**, 408-416. Brief clinical and detailed hematologic observations were made in 20 children with iron-deficiency anemia of infancy, treated with iron-dextran complex. Hematopoietic responses to iron-dextran are described. These are useful in assessing both the proper diagnosis of anemia and the physiologic utilization of iron-dextran complex in erythropoiesis. —Author's Summary.

**297. BUCKINGHAM, SUE, & SOMMERS, SHELDON C.** (Boston City Hosp., Mass.) **Pulmonary hyaline membranes.** *Amer. J. Dis. Child.*, 1960, **99**, 216-227. The lungs of 25 infants with hyaline membrane disease were studied histologically and in part by ultraviolet microscopy. Hypersecretory changes occurred in the terminal bronchioles and alveolar lining cells. DNA found incorporated in the membranes appeared to have been leached out of the alveolar lining cells. Experimental pulmonary hyaline membrane formation was studied in mice with use of high oxygen concentrations and various pharmacologic agents that may be related to suspected pathogenetic mechanisms. Mice were found to be resistant to concentrated oxygen but showed an enhanced response and many hyaline membranes after atropine, Compound 48/80, pertussis-sensitization, and cortisone. Tryptamine did not confer protection against membrane formation in these experiments. It is suggested that the secretory products of the respiratory and alveolar epithelium participate in the formation of the hyaline membranes and that these changes may reflect autonomic nervous system dysfunction. —Authors' Summary.

**298. COCHRANE, W. A.** (Dalhousie Univer., Halifax, N.S., Canada) **Studies in the relationship of amino acids to infantile hypoglycemia.** *Amer. J. Dis. Child.*, 1960, **99**, 476-488. The results of investigation into 12 cases of idiopathic infantile hypoglycemia have been presented. Six of the patients investigated revealed a marked fall in blood sugar after the administration of casein hydrolysate or L-leucine. The "leucine-sensitive" patients were tested with several other amino acids without evidence of a similar hypoglycemic effect. In vivo animal experiments have included the intravenous administration of L-leucine to rabbits, rats, and dogs. In vitro experiments with use of isolated rat diaphragm indicate an increased uptake of glucose in the presence of L-leucine. Insufficient experiments have been carried out with use of rat liver slices at the present time to interpret the results, but it would also appear that leucine may interfere with some metabolic process in the liver. Possible biochemical explanations of the hypoglycemic effect of leucine are presented, with a review of the pertinent literature. Finally a discussion of the therapy of infantile hypoglycemia is given, and it is suggested that cortisone or corticotropin combined with extra carbohydrate 30 minutes after feeding is the therapy of choice. A low leucine diet might be considered for the treatment of severe hypoglycemic patients who are found to be markedly sensitive to leucine. —Author's Summary.

**299. CORT, RUTH L.** (Inst. Care of Mother and Child, Prague, Czechoslovakia) **Postnatal adjustments in water, nitrogen and electrolyte metabolism in premature infants.** *Ann. paediat. Fenniae*, 1959, **5**, 275-289. External balances of water, nitrogen, potassium, sodium and chloride have been carried out in eight newborn premature infants for periods of 4 to 5 days following birth. The data obtained have been analysed individually according to clinical condition and manner of feeding. The following inferences were drawn from this small group: (1) The feeding of breast milk alone did not markedly influence the urinary losses of N or electrolyte. The feeding of large amounts of calories in the form of glucose to one infant probably did exert some N and K sparing effect, and was associated with a larger Na loss in the urine. (2) In one infant, a period of respiratory difficulty was associated with an unusually large loss of K into the urine, and further instances of the occurrence

of large N and K losses during respiratory distress have been drawn from the literature. (3) Of five instances of oliguria occurring in this group, one involved an oedematous infant in good clinical condition. On three occasions a low urine volume and low urinary concentration was associated with hypothermia, and on one occasion with deterioration in clinical condition secondary to sepsis. The association of water and Na retention with postnatal pathology is discussed. —Authors' Summary.

**300. CRANNY, ROBERT L., & CRANNY, CAROLINE L.** (Brookhaven Natl Laboratory, Upton, L.I., New York) **The creatinine excretion and urine volume of premature infants.** *Amer. J. Dis. Child.*, 1960, **99**, 507-515. The premature infants in this study, all of whom were less than one month of age during the time they were studied, excreted into their urine a greater amount of creatinine than did full-term infants. This finding is discussed, and an explanation for this increased creatinine excretion is suggested. At a given age the mean value for the 24-hour urine volume excreted by premature infants was found to agree approximately with the few similar values that could be found in the literature. Also, within the first three days of life, there was close agreement between the mean value of the urine volume of premature infants and that of term infants, but by one week of age the mean value for the urine volume of premature infants was approximately 50% less than that of term infants. When the mean values of the urine volumes that were obtained from 45 normal premature infants were plotted in semilogarithmic fashion against body weight a straight-line relationship was found. 24-hour urine specimens obtained from male infants by means of a Penrose drain apparatus were shown to be as reliable for completeness, as were similar specimens obtained from female infants by means of an indwelling catheter. —Authors' Summary.

**301. CRANNY, ROBERT L., & CRANNY, CAROLINE L.** (Brookhaven Natl Laboratory, Upton, L.I., New York) **The urinary excretion of 17-hydroxycorticosteroids by premature infants.** *Amer. J. Dis. Child.*, 1960, **99**, 344-348. The amounts of 17-OHCS excreted into the urine of normal and of clinically distressed premature infants were measured. The results suggest that primary or secondary adrenal insufficiency should be given consideration as a possible cause of clinical distress in premature infants. It is imperative to remember that normal infants exhibited considerable variability in the amounts of 17-OHCS that they excreted into the urine. Therefore, reported mean values for urinary 17-OHCS should not be used as absolute criteria for the interpretation of an individual value. —Authors' Summary.

**302. CRANNY, ROBERT L.** (Brookhaven Natl Laboratory, Upton, L.I., New York), **KIRSCHVINK, JOSEPH F., & KELLEY, VINCENT C.** **The half-life of hydrocortisone in normal newborn infants.** *Amer. J. Dis. Child.*, 1960, **99**, 437-443. A technique has been described for obtaining sequential 5 ml. blood samples from newborn infants by means of a single scalp vein venipuncture-infusion. When performing half-life studies involving hydrocortisone-free alcohol, the first postinfusion sample may be obtained at 15 minutes and the entire procedure may be completed in 90 minutes. In infants, the administration of 2 mg. per kilogram of hydrocortisone (free alcohol) resulted in half-life values that were significantly ( $P < 0.01$ ) longer than those resulting from doses of 1 mg. per kilogram. When hydrocortisone was administered in a dose of 1 mg. per kilogram no significant difference was found between the resulting half-life values in adults and those in newborn infants. No significant difference was found between the half-life values in term infants and those in premature infants, when identical doses per kilogram were administered to both groups. —Authors' Summary.

**303. FINLEY, SARA C., & HARE, RUTH S.** (Med. Coll., Birmingham, Alabama) **Bromide space in infants and children.** *Amer. J. Dis. Child.*, 1959, **98**, 749-755. The relationship between bromide space and surface area in normal infants and children between the ages of 6 weeks and 15 years has been described. So that calculation of surface area may be omitted, a nomogram has been constructed showing the relationship of bromide space to height and weight. Given the height and

weight of an individual, the average normal bromide space may be determined from this nomogram, and the average normal exchangeable chloride may be calculated. Deviations from the average normal values may be detected by a comparison of the determined values with those derived from the nomogram. Although full-term infants in the first 48 hours of life had larger bromide spaces than those shown by the nomogram, six older but smaller infants had spaces agreeing with the nomogram very closely. It is possible, therefore, that the nomogram may be valid for subjects smaller than 0.25 sq. m. . . . —Authors' Summary.

**304. FOMON, SAMUEL J., & BARTELS, DONITA J.** (Coll. Medicine, Univer. of Iowa, Iowa City) **Concentrations of cholesterol in serum of infants in relation to diet.** Amer. J. Dis. Child., 1960, **99**, 27-30. Concentrations of cholesterol were determined with serum of 55 normal infants ranging from 1 week to 6 months of age. The infants were divided into six groups on the basis of the feeding employed. The mean concentration of cholesterol in 53 observations with breast-fed infants was 171.7 mg/100 ml., and the mean concentration in 17 observations with eight infants fed whole cow's milk or evaporated milk and water (without additional carbohydrate) was 156.0 mg/100 ml. The difference in mean concentration of cholesterol with these two feedings was not statistically significant at the 5% level of probability. Infants ingesting a formula in which the predominant source of fat was soya oil had the lowest mean concentration of cholesterol in the serum (108.0 mg/100 ml.), and infants receiving one of three formulas in which corn oil was the predominant source of fat had intermediate concentrations (143.5, 121.0, and 119.4 mg/100 ml.). —Authors' Summary.

**305. GHADIMI, H., & SHWACHMAN, H.** (Children's Med. Center, Boston, Mass.) **Evaluation of amino-aciduria in infancy and childhood.** Amer. J. Dis. Child., 1960, **99**, 457-475. The principles and techniques of paper chromatography are described. Preparation of urine for paper chromatography and amino nitrogen determination are explained. The mechanisms of amino-aciduria are reviewed and a revised classification which includes all reported amino-acidurias is presented in table form. Different methods of expressing quantitatively the excretion of  $\alpha$ -amino nitrogen in urine are examined. The simplicity and advantages of expressing quantitative data as  $\alpha$ -amino nitrogen excretion in relation to age are discussed. —Authors' Summary.

**306. GRONIOWSKI, JANUSZ.** (Academy of Med., Poznan, Poland) **Morphological investigations on pulmonary circulation in the neonatal period.** Amer. J. Dis. Child., 1960, **99**, 516-523. Microscopical investigations of the fetal and neonatal lungs made by means of injections of the pulmonary vascular trunks and serial sections are presented. I believe that there exist in the perinatal period two vascular ways for the flow of blood through the pulmonary parenchyma. —Author's Summary.

**307. LINDQUIST, BERTIL, & MALMCRONA, RAOUL.** (Univer. of Gothenburg, Sweden) **Dietary fat in relation to serum lipids in the normal infant.** Amer. J. Dis. Child., 1960, **99**, 39-47. The effect of different kinds of fat on the serum lipids has been investigated in the newborn infant during the first 3-4 weeks of life. The infants were given breast milk or a formula feeding containing fat either as corn oil or as cream. Fat represented 40% of the total calorie supply. An initial increase of the serum lipids was observed during the first few days of life when the fat was given either as breast-milk fat, corn-oil fat or cream fat. In the following period, however, the serum lipids of the corn oil formula-fed infants remained on a more or less constant level while those of the breast-milk and cream formula fed infants still were increasing. The different effect of the fats supplied is discussed with reference to the fatty acid composition. —Authors' Summary.

**308. LIPTON, EARLE L., STEINSCHNEIDER, ALFRED, & RICHMOND, JULIUS B.** (State Univer. New York Upstate Medical Center, Syracuse) **Autonomic function in the neonate: II. Physiologic effects of motor restraint.** Psychosom. Med.,



1960, 22, 57-65. "The experiment was designed to investigate the effects of short-term swaddling on infants when unstimulated and on reactivity to stimulation. . . . Infants are quieter, sleep more, and have lower heart rates when swaddled under the experimental conditions we employed. . . . When swaddled and experimentally stimulated, some infants show no difference and may even manifest greater responses in heart and respiratory rates than when free to move. Five of the 10 infants responded less when swaddled. . . . Overt motor responses alone do not account for heart-rate responses to stimulation. . . ."

309. MARX, THOMAS I., & HUNTER, CHARLES A., Jr. (Midwest Res. Inst., Kansas City, Mo.) **Fetal phono- and electrocardiograms; their recording and electronic counting.** J. appl. Physiol., 1959, 14, 655-657. The apparatus described is designed to be used with simultaneous measurements of the relative magnitude of uterine activity during labor, (thus relating fetal condition to the muscular forces imposed during labor). The authors reported their method for recording the uterine activity in Rev. Sci. Instr., 1958, 29, 585. Circuit diagrams of the preamplifier, phone amplifier, and rate-meter described in the present article have been deposited with the ADI Auxiliary Publications Project, Library of Congress. —D. H. Eichorn.

310. MEADOWS, ROBERT W., HUGHES, WALTER T., WALKER, LILLIE C., & ETTELDORF, JAMES N. (Coll. Med., Univer. of Tennessee, Memphis) **Effects of oral 19-nortestosterone derivative (nilevar) on growth of premature infants.** Amer. J. Dis. Child., 1960, 99, 206-211. 13 premature infants receiving norethandrolone and eight control infants were studied in order to determine the influence of a new anabolic steroid on growth, hematologic profile, and certain blood constituents. Eight infants received 1.0 mg. of the drug per kilogram, and five received 2.0 mg. per kilogram of body weight per day, orally. The steroid was begun on the third day and continued for 33-85 days. No significant influence on weight, length, serum protein, serum bilirubin, blood NPN, serum cholesterol, and hemograms was observed. There were no withdrawal effects. No androgenic or other undesirable effects could be attributed to steroid administration. —Authors' Summary.

311. ROTH, GOSTA, SJOSTEDT, & CALIGARA, FRANCO. (Univer. Hosp., Lund, Sweden) **The "in vivo" foetal oxygen dissociation curve.** Biol. Neonat., 1959, 1, 61-67. The  $pO_2$  was measured polarographically;  $CO_2^{sat}$ , with the Brinkman Haemoreflector; and pH, with a glass electrode connected to a Radiometer pH-meter type GPM22, equipped with a galvanometer type PHA621. The pH and  $pO_2$  measurements were made on the same sample simultaneously at a temperature of 37° C. "Immediately after delivery the cord was clamped in two places and rapidly brought to the laboratory where the blood was drawn anaerobically into heparinized Luer syringes. The analyses for the pH and  $pO_2$  were started at once and the  $CO_2^{sat}$  was made about 25 min. later. In order to reduce the oxygen consumption of the blood and a pH drift, the Heparine used was saturated with NaF. For the construction of the oxygen dissociation curve blood has been used both from the umbilical vein and from the umbilical arteries." The observed values for  $pO_2$ ,  $CO_2^{sat}$  and pH and calculated values for  $pO_2$  at pH 7.00, 7.10, 7.20, 7.30 and 7.40 are presented for 42 samples. The latter values are used to plot a "best fit" oxygen dissociation curve. ". . . there is a close agreement between the 'in vitro' oxygen dissociation curve of Darling et al. and the 'in vivo' curve of Beer et al. and our own curve. This similarity in the results of studies made in 1941, 1955 and 1958 in different countries and with different techniques indicates that the foetal oxygen dissociation curve found has a general validity. . . . The agreement of the results is a confirmation that the measurements done with the new polarographic methods for oxygen tension analyses are directly comparable with those done with the classical gasometric methods." —D. H. Eichorn.

312. SCHAYER, RICHARD W. (Merck Inst., Rahway, N.J.) **Relationship of stress-induced histidine decarboxylase to circulatory homeostasis and shock.** Science, 1960, 131, 226-227. Histidine decarboxylase activity of mouse tissues is increased

by stress and by injection of epinephrine and norepinephrine, suggesting a balance between histamine and catechol amines producing a component of circulatory homeostasis. Imbalance during intense stress might lead to failure of circulatory homeostasis and to shock. Reasons for discounting histamine as "shock toxin" may be invalid. —Abstract.

**313. SECKEL, HELMUT P. G.** (Univer. of Chicago, Sch. Med., Illinois) **Concepts relating the pituitary growth hormone to somatic growth of the normal child.** *Amer. J. Dis. Child.*, 1960, **99**, 349-379. A theory is proposed concerning the physiologic role of the pituitary growth hormone in the pre- and postnatal somatic growth of man and certain animals, including its function during the period of maturity and senescence. The theory suggests that, during human prenatal life and, postnatally, up to about 2 (1 to 4) years of age, the pituitary growth hormone plays no, or merely a minor, part in the normal somatic growth of the child. Up to that age the embryo, fetus, and infant are thought to be growing by an "initial intrinsic impetus" of the tissues. Between about 2 or 4 and 11 to 15 years of age, the level of circulating pituitary growth hormone is assumed to rise to a high peak, only to drop sharply after puberty under the impact of the steroid sex hormones. A rather low and decreasing plateau is probably maintained during adult life. An alternative theory of change with age of "tissue sensitivity" to circulating growth hormone is also referred to. . . . —From Author's Summary and Conclusions.

**314. SHEPARD, THOMAS H., II** (Univer. of Washington Sch. Medicine, Seattle), **NIELSEN, ROBERT L., JOHNSON, MARY LOU, & BERNSTEIN, NAN.** **Human growth hormone. I. Metabolic balance studies carried out in a hypopituitary child.** *Amer. J. Dis. Child.*, 1960, **99**, 74-80. Clinical and balance data obtained during the administration of 5 mg. of human growth hormone (Raben) to a "hypopituitary" 3 10/12-year-old boy are presented. A technique for carrying out a balance study at home is described. An increased positive balance was shown for Ca, P, Na, K, and N. Increases in fasting unesterified fatty acids and fasting blood glucose were observed, while the blood urea nitrogen, Ca, and P dropped. There was no increase in appetite associated with the onset of positive balance. —Authors' Summary.

**315. SPIES, TOM D.** (Northwestern Univer. Med. Sch., Chicago, Ill.), **DREIZEN, SAMUEL, SNODGRASSE, RICHARD M., ARNETT, CLEO M., & WEBB-PEPLOE, HAMILTON.** **Effect of dietary supplement of nonfat milk on human growth failure.** *Amer. J. Dis. Child.*, 1959, **98**, 187-197. The effectiveness of non-fat dry milk in alleviating growth failure was studied in 10 undernourished pre-adolescent and in 10 undernourished adolescent subjects. The skeletal and somatic growth progress of each subject was followed through presupplement, supplement, and postsupplement periods, each of six months' duration. The nutrient value of the supplement (given six days per week for six months) was approximately equivalent to that of 2 qt. of skim milk. It was observed that (1) In the preadolescent group the added milk induced a statistically significant acceleration in skeletal and general body growth which was not maintained after the supplement was terminated. (2) In the adolescent group there was a statistically significant increase in rate of general body growth during the period of supplementation without a significant change in the role of skeletal maturation. (3) There was no significant correlation between individual gains in skeletal and somatic growth in either group during the supplement period, each subject reacting to the added milk in his own distinctive manner. —Authors' Summary and Conclusions.

**316. VEST, MARKUS F., & STREIFF, RICHARD R.** (Univer. of Basel, Switzerland) **Studies on glucuronide formation in newborn infants and older children.** *Amer. J. Dis. Child.*, 1959, **98**, 688-693. N-acetyl-p-aminophenol is the oxidation product formed in the body after the absorption of an orally administered dose of acetanilid. The N-acetyl-p-aminophenol is conjugated with glucuronic acid to form N-acetyl-p-aminophenol glucuronide. We compared the course and speed of this glucuronide formation in newborn infants and older children by measuring the



blood concentrations of these compounds. In newborn infants the formation of the glucuronide was found to occur at a greatly retarded rate. The study shows that evidently the glucuronic acid transferase, localized in the liver cells, is not completely developed in the newborn infant. The importance of this finding for the pathogenesis of icterus neonatorum is discussed, with the fact in mind that it is also necessary for bilirubin to be conjugated with glucuronic acid before it can be excreted. —Authors' Summary.

**317. WONG, MARY, & CASSELS, DONALD E.** (Univer. Chicago Clinics, Ill.) **The fetal electrocardiogram.** *Amer. J. Dis. Child.*, 1960, **99**, 4-7. Experience with recording the fetal heart rate with commercial electrocardiographic equipment has been reviewed. 132 patients from three months' gestation to term were studied and tracings satisfactory for determining heart rate were obtained in 117, with unsatisfactory tracings in 15 instances. Hydraminos did not interfere with the fetal record. The mean fetal heart rate varies from 131 per minute to 168 per minute, with the majority having rates 140 to 149 per minute. There is a gradual fall in rate towards term. There is no relation between the fetal heart rate and sex or maternal heart rate. It is suggested that readily available equipment may aid in the determination of pregnancy, multiple pregnancy, and fetal death. —Authors' Summary.

**318. ZITA, A. C., McDONALD, E., & ANDREWS, A. L.** **Dietary habits and the dental caries experience in 200 children.** *J. dent. Res.*, 1959, **38**, 860-865. Weekly sugar intake 164 teaspoons at meal, 55 between meals. Little correlation between total sugar intake and DMFS (decayed, missing, filled surfaces) (+0.10). Between meal sugar correlated with DMFS +0.77. Low correlation between frequency of eating and DMFS (+0.18). Slight negative correlation DMFS (-0.08) and total milk intake. For age mean DMFS higher for girls (7.07) than for boys (6.31). Urban children higher DMFS (6.9) than rural (4.92); this is significant at the 4% level. —W. M. Krogman.

#### CLINICAL MEDICINE AND PATHOLOGY

**319. ABDUL-GHAFFAR, H., & MUHLER, J. C.** **Pretreatment of teeth with sodium fluoride prior to stannous fluoride application.** *J. dent. Res.*, 1959, **38**, 901-904. Based on 600 children, 6-15 years, from Spencer, Indiana, divided into 3 groups: (1) one application 4% solution sodium fluoride, followed by single application 8% solution stannous fluoride; (2) two applications stannous fluoride; (3) control. After a year there was significant reduction in dental caries in groups 1 and 2. —W. M. Krogman.

**320. AULD, RICHARD M., POMMER, ALFRED M., LOUCK, JOHN C., & BURKE, FREDERIC G.** (Georgetown Univer. Med. Center, Washington, D.C.) **Vitamin A absorption in mongoloid children.** *Amer. J. ment. Def.*, 1959, **63**, 1010-1013. To determine whether mongoloids are capable of metabolizing vitamin A in a normal manner, a group of 20 mongoloid children was compared with 17 non-mongoloid retarded children by means of several laboratory tests. Vitamin A was administered orally. The results indicate that the mongoloid children had a lower absorptive capacity of vitamin A. —J. W. Fleming.

**321. BAUME, L. J., HAUPL, K., & STELLMACH, R.** **Growth and transformation of the temporemandibular joint in an orthopedically treated case of Pierre Robin's syndrome.** *Amer. J. Orthodont.*, 1959, **45**, 901-916. The micrognathia in this case was treated orthopedically at the age of 2 months. By 7 months normal jaw relations were established. The infant died at 9 months of other causes. Investigation showed a forward displacement of the mandibular fossa by coordinated apposition and resorption. The capsular structures were not affected. The condylar head showed vertical and horizontal growth greater than normally expected. It is concluded

that the effect of orthodontic treatment goes beyond the periodontal structures of the jaws, and extends even to remodelling of parts of the temporal bone. The X-ray film cannot show or explain all the growth changes induced by orthodontic appliances; only animal experimentation can achieve a total biossay. —W. M. Krogman.

**322. BROWN, HARMON** (Emory Univer. Sch. Med., Atlanta, Georgia), & **McGARITY, WILLIAM C.** **Chronic thyroiditis in childhood.** *J. Amer. med. Ass.*, 1959, **171**, 1182-1186. Only 31 cases of this disease are reported in the literature. The case of an 11-year-old girl is described. Diffuse enlargement of the thyroid gland, low protein-bound iodine value, and the appearance of a nodule in one lobe led to the diagnosis. Needle biopsy or surgery may be necessary to establish a definite diagnosis. The treatment is outlined. —I. Altman.

**323. BURKE, EDMUND C.** **Chronic nephritis in children: a diagnostic enigma.** *Proc. Mayo Clinic*, 1959, **34**, 591-597. Three cases of persistent hematuria and proteinuria with a benign course are contrasted with a case of chronic nephritis in which progressive renal failure and death occurred. The type of acute nephritis accompanied by features of the nephrotic syndrome may constitute a more serious type of nephritis and is attended with a significantly higher mortality rate. Persistent microhematuria and proteinuria in childhood may at times be appropriately viewed as indicative of persistent, active nephritis rather than chronic nephritis; the prolonged course is none the less benign, rather than progressive and fatal. The prognosis should be regarded optimistically because of the likelihood that renal healing will be complete. This concept is based on the fact that the condition is associated with normal growth and development and with lack of evidence of progressive renal failure, azotemia and hypertension. —Author's Summary and Conclusions.

**324. BURNSTINE, RICHARD C., & PAINE, RICHMOND S.** (Harvard Univer. Med. Sch., Boston) **Residual encephalopathy following roseola infantum.** *Amer. J. Dis. Child.*, 1959, **98**, 144-152. Roseola infantum is not always a disease of benign prognosis, and six cases of persistent neurologic complications have been presented. All have residua, including hemiparesis, and in addition, at least three are mentally retarded and three, epileptic. It is felt that the sequelae are related to prolonged seizures occurring during the preeruptive stage of roseola. The incidence of this complication is uncertain. The total reported cases with permanent sequelae now number nine. The exact etiology of these convulsions and of the residual encephalopathy is unclear, and several theories have been discussed. Possible treatment seems limited to stopping or to preventing the associated convulsions; the need for vigorous therapy of any febrile seizure is emphasized. Acetylsalicylic acid and phenobarbital prophylaxis may be considered in children under the age of 24 months with unexplained high fever, especially if roseola is suspected. —Authors' Summary and Conclusions.

**325. BUTCHER, W. A., & RETTIG, JUDITH.** (Columbus State Sch., Ohio) **A clinical study of amoebiasis and its treatment in a selected section of institutional population.** *Amer. J. ment. Def.*, 1959, **63**, 615-617. It was suspected that some chronic cases of diarrhea were amoebiasis. A project was instituted to determine the prevalence of amoebiasis in certain wards, as well as the efficacy of polybenzarsol (trade name "Benzarsol") to treat the condition. The wards chosen contained 180 individuals of both sexes, all under 16, and all low-grade in intelligence. A survey was done of the stools on all patients in a given living unit. All patients were treated with polybenzarsol for 10 days at a dosage of roughly 7 mgm. kilo body weight. All cases were followed up with stool examinations two, four, and six weeks after completion of treatment. 20% of the subjects were found to have stools positive for amoebae, this incidence being proportionately distributed among the wards. After treatment all positives reverted to negatives and all negatives remained so. There were no manifestations of toxicity or side reactions. —J. W. Fleming.

**326. CHRISTENSON, CHARLES N.** (Lilly Res. Lab., Indianapolis, Indiana) **Reactions to poliomyelitis vaccine.** J. Amer. med. Ass., 1959, **171**, 869-872. Analysis is made of 284 complaints made in connection with Eli Lilly's production of over 184,000,000 doses of poliomyelitis vaccine. Of the 284 complaints, 138 were concerned with burning or stinging pain on injection. The remainder consisted of 37 neurological, 56 allergic, 11 febrile, 17 local, 17 miscellaneous, and 8 unspecified. In no case was it shown that inoculation-induced poliomyelitis had occurred. "When the millions of doses of poliomyelitis are viewed against this background, the relative safety of the vaccine is apparent." —I. Altman.

**327. CROME, LEONARD L.** (Fountain Hosp., London, England) **Cortical lesions in cerebral palsy.** Cerebral Palsy Bull., 1959, No. 6, 22-28. Cases are discussed and photographs of brain sections are presented. Morphological study leads to the following lessons: (1) in a few cases, etiology of the condition can be determined, e.g., birth injury, meningitis, and embolism; (2) in others, the time limit for the onset of the causative disturbance can be set, e.g., microgyria, pachygyria, or less certainly ulegyria; (3) with carefully recorded clinical notes, neuropathology can make significant contributions to the study of cerebral palsy. —I. Altman.

**328. DAVISON, FRANCIS W.** (George F. Geisinger Memorial Hosp., Danville, Pa.) **Acute laryngeal obstruction in children.** J. Amer. med. Ass., 1959, **171**, 1301-1305. Acute obstructive supraglottic laryngitis develops with great rapidity, so that if tracheotomy, if needed, is not performed promptly the child may die. In a series of 140 patients over a 14-year period, tracheotomy was found necessary in 28. Steroid therapy obviated the need for tracheotomy in 13 cases in which it was used. But tracheotomy remains the treatment of choice when obstruction is marked. Four case reports are given. —I. Altman.

**329. GAVRILĂ, I., COMES, L., SOLOVIEV, M., & PIRVU, C.** (Clinica bolilor contagioase, Cluj) **Citeva aspecte ale evoluției crupului difteric din ultimii ani.** (Some aspects of the evolution of diphtheritic croup during recent years.) *Pediatria*, 1959, **8**, 235-244. This study includes 242 cases of diphtheritic croup admitted to the Clinic of Infectious Diseases, Cluj, between 1945 and 1956. It was established that: (1) Cases of diphtheritic croup form 27% of the total number of cases of diphtheria. (2) The incidence of diphtheritic croup is related to age, (an 87% majority of the cases occurring before the age of four years), to the season (the incidence-rate of croup displaying two peaks, in March and November), to epidemic outbursts of diphtheritic infection in general, to simultaneous epidemics of diseases affecting the upper air-passages (influenza, measles, whooping-cough) and, to a certain extent, to the ample use of antibiotics in rhinopharyngeal infections. (3) The influence of antibiotics is particularly obvious as regards the death-rate which in diphtheritic croup since 1948 has fallen from about 35% to 10%. (4) Owing to its influence on the diphtheria bacillus and associated organisms, penicillin helps in arresting the local laryngeal process and checks the course of diphtheritic croup towards the asphyctic stage. (5) During the past two years (1957-1958), owing to the association of cortisone which further contributes to arrest the local process, the lethality-rate in diphtheritic croup has dropped to 2%, whereupon lethality due to diphtheria fell to 2%. —English Summary.

**330. GIBBS, FREDERIC A.** (Univer. of Illinois Sch. Med., Chicago), **GIBBS, ERNA L., CARPENTER, PHYLLIS R., & SPIES, HAROLD W.** **Electroencephalographic abnormality in "uncomplicated" childhood diseases.** J. Amer. med. Ass., 1959, **171**, 1050-1055. Electroencephalographic tracings were obtained on 1298 children admitted to the Municipal Contagious Disease Hospital in Chicago over a two-year period with a diagnosis of measles, mumps, chickenpox, rubella, or scarlet fever. A high percentage showed marked encephalographic abnormalities during the acute and postacute periods, the great majority of which cleared up within 10 days. Of the five diseases studied, rubella was the least likely and measles the most likely to be accompanied by clinical or electroencephalographic evidence of encephalitis.

All in all, it seems not unlikely that childhood contagious diseases are responsible for more central nervous system disease than is generally supposed. —I. Altman.

**331. GORLIN, R. J., & CHAUDHRY, A. P.** *The effect of hypervitaminosis A upon the incisor and molar teeth, the alveolar bone, and temporomandibular joint of weanling rats.* J. dent. Res., 1959, 38, 1008-1015. The effect is more on bone than on teeth. Since the toxicity produced causes loss of appetite, there are concomitant induced vitamin, mineral, and protein deficiencies. Hence, much of changes in bone and teeth are due to protein deficiency. Therefore, "increased vascularity and edema of both the pulp and periodontal ligament seem to be the only specific changes seen in this condition." —W. M. Krogman.

**332. HJELT, L., & LANDTMAN, B.** (Univer. of Helsinki) *The pulmonary vascular bed in congenital heart disease.* Ann. paediat. Fenniae, 1959, 5, 245-257. Lung specimens were obtained at autopsies from 246 children with congenital heart disease. 230 of the children were infants under one year of age. The classification of the patients was based on postmortem data and on clinical findings. There were 121 acyanotic and 125 cyanotic cases. Pathologic changes were not observed in the pulmonary vascular bed in the youngest infants. The pulmonary veins appeared normal in all cases. The following main types of pulmonary vascular changes were found: compensatory changes, changes resembling simple pulmonary arteriosclerosis, arteritic changes and anomalies (septation). . . . Pulmonary vascular changes were frequently seen in the present series. Apart from arteriosclerotic lesions, which were more common in the acyanotic than in the cyanotic group, the incidence and pattern of these changes were essentially the same in the different types of cardiac malformations. It therefore appears that not only hemodynamic factors are responsible for the production of these vascular changes. —From Authors' Summary.

**333. KAUFMAN, STEPHEN, & BRUYN, HENRY B.** (Univer. Calif. Med. Center, San Francisco) *Pertussis.* Amer. J. Dis. Child., 1960, 99, 417-422. A brief review of our experience with pertussis is presented in a series of 199 cases. 38% of our cases were under 6 months of age when hospitalized. Pertussis remains second to bronchopneumonia as the most significant infectious disease of infancy. Our study emphasizes the child-to-child contact within the home as the most important means by which pertussis is acquired. The neonate can be best protected by adequate primary immunization or booster inoculation of siblings during the maternal gestation period. Most authors agree that therapy during the catarrhal stage is somewhat efficacious, but, in the absence of a history of contact, we find the diagnosis difficult during this early stage. White blood cell count may be suggestive, but the absence of a leukocytosis and/or a lymphocytosis is not helpful in dismissing the diagnosis. Our study reveals that paroxysmal cough, emesis, and coryza are seen in the majority of patients; fever, cyanosis, and pneumonia in one-quarter of patients, and convulsions, otitis media, and diarrhea are infrequent. In agreement with other studies, we believe that therapy during the paroxysmal stage does not often alter the clinical course and may not prevent secondary bacterial complications. Nevertheless, in the critically ill and in the infant, antibiotics and hyperimmune human globulin are given in the hope that the paroxysmal stage will be shortened. —Authors' Summary and Conclusions.

**334. LATTIMER, JOHN K.** (Babies Hosp., New York City), **MELICOW, MEYER M., & USON, AURELIO C.** *Nephroblastoma (Wilms' tumor): Prognosis more favorable in infants under one year of age.* J. Amer. med. Ass., 1959, 171, 2163-2168. Nephroblastoma is one of the worst of the "organ" cancers in children. Prior to 1934, 91% of the children treated for it at Babies Hospital died. Among 42 patients, aged 4 days to 9 years, treated since then with modern surgery and X-ray therapy, 45% have survived after follow-up for at least 3 years. Age at time of nephrectomy "was the most important single factor in prognosis. Of the children operated on before the age of 2 years, 73.3% were still alive after a three-year follow-up; of those operated on before the age of one year, 90% were alive. On the other hand, only

18.5% of children operated on after the age of 2 years were alive three or more years later." Symptoms, diagnosis, and treatment are described. —I. Altman.

**335. LONGINO, LUTHER A.** (Harvard Med. Sch., Boston, Mass.), **WOOLEY, MORTON M., & GROSS, ROBERT E.** **Esophageal replacement in infants and children with use of a segment of colon.** *J. Amer. med. Ass.*, 1959, **171**, 1187-1192. Utilization of a segment of the colon has been carried out in 18 patients requiring substitution for either a diseased or congenitally atretic esophagus. The definitive procedure for the patients with esophageal atresia should be performed when the patient is either 1½ years of age or at least 20 lb. (9.1 kg.) in weight. The patient with irreversible stricture caused by lye should have substitutional therapy when it becomes apparent that dilation therapy is of only temporizing value. The patient with severe peptic esophagitis causing chronic blood loss as well as nutritional crippling should have formation of an adequate conduit as well as resection of the bleeding source. The patient who has bleeding esophageal varices is ideally treated by a portal-systemic type shunt. If this is impossible, then a direct attack on the esophageal varices is the remaining alternative. In our experience, suture ligation of varices has been of only temporary benefit. Resectional and substitutional therapy seems to be a more rational approach. At the present time we feel that the colon is the best structure for esophageal substitution. —Authors' Summary.

**336. MELNICK, JOSEPH L.** (Baylor Univer. Coll. Med., Houston, Texas), **BENYESH-MELNICK, MATILDA, & BRENNAN, JAMES C.** **Studies on live poliovirus vaccine: Its neurotropic activity in monkeys and its increased neurovirulence after multiplication in vaccinated children.** *J. Amer. med. Ass.*, 1959, **171**, 1165-1172. Tests on monkeys of the Cox and Sabin live poliovirus vaccines showed them to be more neurovirulent than has been claimed by their developers. In a study of Mexican schoolchildren to whom Sabin's strains were fed the vaccine, it was found that many children who were free of poliomyelitis antibody were resistant to infection by the oral vaccine. This is attributed to interference by current infection with nonpoliomyelitis enterovirus blocking the implantation of the vaccine virus. "Interference of this sort might well limit the effectiveness of an orally given vaccine in areas where enterovirus infections are common." Caution is urged in the introduction of live vaccines on a mass basis, especially in view of the genetic instability of the attenuated strains of poliovirus currently available. —I. Altman.

**337. MENKES, JOHN H.** (Neurological Inst., New York City) **The pattern of urinary alpha keto acids in various neurological diseases.** *Amer. J. Dis. Child.*, 1960, **99**, 500-506. The urinary keto acid excretion of 32 children was examined by paper chromatography of the 2,4-dinitrophenylhydrazones (DNPH) derivatives. Individual keto acids were identified by cochromatographing them with the authentic derivatives or by hydrogenolysis of their DNPH's to form the respective amino acids. What was taken to be a normal keto acid excretion pattern was found in all 10 controls and in 17 out of 22 children with neurological conditions. In two children with phenylketonuria and in one child with maple syrup disease, previously described keto acid abnormalities were demonstrated. Two other infants with severe cerebral dysfunction possessed a distinctly abnormal pattern. The significance of this in terms of a metabolic defect is yet unknown. —Author's Summary.

**338. PARKKULAINEN, K. V., & SOLONEN, KAUKO A.** (Univer. of Helsinki) **The influence of early treatment on the prognosis of congenital dislocation of the hip joint.** *Ann. paediat. Fenniae*, 1959, **5**, 290-303. Two series of the congenital dislocation of the hip treated in the Pediatric Department of the University Central Hospital, Helsinki, are presented. One is a series of 47 cases from the years 1946-1953 and the other of 51 cases from the years 1957. The results are presented according to the age at which treatment was instituted. Between these years there has been a great advance in arriving at an early diagnosis and consequently in the results achieved. —Authors' Summary.

**339. PARMELEE, ARTHUR H., Jr., FISKE, CLAUDE E., & WRIGHT, ROGERS H.** (Univer. of California Med. Center) **The development of ten children with blindness as a result of retrolental fibroplasia.** *Amer. J. Dis. Child.*, 1959, **98**, 198-220. Ten prematurely born children with normal vision and ten prematurely born children who were blind as the result of retrolental fibroplasia were evaluated in the first year of life by means of the Gesell infant development test. All were considered to be developmentally normal at that time, although one of the blind children was found to have a severe hearing deficit in addition to his blindness. This article is concerned with the further development of these children in the subsequent four to five years. Seven of the premature infants with normal vision were available for retesting by the Stanford-Binet intelligence test and the Vineland Social Maturity Scale and all were normal at 3 to 6 years of age. Six of the blind children are doing very well as determined by biographical reports of their play activities and social responses and also by psychological testing. Two of these children have acquired a small amount of useful vision in one eye, and a third child has useful vision in both eyes and can read large print with glasses. The remaining three are essentially totally blind. The child with the double handicap of deafness and blindness is progressing surprisingly well and is believed to be normal in his mental potential. However, it is impossible to effectively evaluate his abilities. He has acquired useful vision in one eye that helps him considerably. Three of the children are functioning at a mentally retarded level. However, all show some signs of reasonably normal development. All three have withdrawn considerably from social contact and have other behavioral difficulties suggestive of severe emotional problems. It was concluded that they probably have normal mental potential that is not manifest because of severe emotional problems. Two are receiving psychiatric help and have shown some improvement. Neurological examinations did not reveal any abnormalities in any of the children, except the deaf child. Electroencephalograms were done on six of the children and were not diagnostically significant, though two were suggestively abnormal. A tabulation of the development of four self-help items—(1) walking without support; (2) feeding self with spoon; (3) talking in sentences; (4) toilet training—revealed some delay in the development of all except talking. This pertains to the six normal children, and those with some useful vision were not advanced over those without vision on these items. The three functionally retarded children did almost as well as the other children with respect to walking but had not had success with any of the other items by age 4. It was concluded that developmental examination in the first year of life is a valuable adjunct in the evaluation of prematurely born blind children. This is of particular value to the parents of blind children and the professional workers who aid the parents. The biographical summaries reveal some of the details of the development of the individual children and the family problems associated with rearing a blind child. —Authors' Summary.

**340. POLANI, PAUL E.** (Nat'l Spastics Soc., London, England) **Effects of abnormal brain development on function.** *Cerebral Palsy Bull.*, 1959, No. 7, 27-31. Cerebral palsy is rarely inherited, but when it is, it presents with diplegia and oligophrenia. Because of this fact and the clinical picture of simple spastic diplegia and paraplegia, the association between these conditions and the degree of prematurity, their association with retrolental fibroplasia, and supporting experimental evidence, it is suggested that these forms of cerebral palsy sometimes have a developmental origin. Specifically they may arise from an arrest of development, presumably post-natal, owing to deprivation, through premature birth, of the intrauterine environment which may be essential to final maturation of the nervous system. —Author's Summary.

**341. RAMOS, ALBERTO RAMIREZ, KIRSNER, JOSEPH B., & PALMER, WALTER L.** (Univer. of Chicago Dept. Med., Illinois) **Peptic ulcer in children.** *Amer. J. Dis. Child.*, 1960, **99**, 135-148. The literature concerning peptic ulcer in children has been reviewed. 32 cases of peptic ulceration in children are presented; four with acute ulceration and 28 with chronic peptic ulcer. Medical management was



successful in 20 cases. In three, gastric irradiation was an effective adjunct. In eight, surgical treatment was successful. A stomal ulcer developed postoperatively in one patient. Conclusions: Peptic ulcer is not uncommon in children. (2) Acute peptic ulceration, complicated by hemorrhage or perforation, may develop in association with cerebral damage (trauma, anoxia, hypoglycemia), sepsis, gastric intubation, oxygen administration, and during corticotropin (ACTH) and salicylate therapy. (3) Chronic peptic ulcer in children is more frequent in males than in females at all ages. (4) The symptomatology of peptic ulcer in children generally is atypical. After puberty, symptoms more closely resemble the ulcer pattern of adults. (5) Duodenal ulcers exceed gastric ulcers in a ratio of approximately 6.5:1. (6) Chronic peptic ulcer in children is more frequent than acute ulceration and often remains unrecognized for long periods. (7) The roentgenological examination of the stomach and duodenum is the most important diagnostic procedure in the recognition of peptic ulcer in children. (8) Medical management, with avoidance of gastrointestinal irritants in food and medication, frequent antacids, and sedation, is effective in the majority of children with peptic ulcer. (9) As in the adult, surgical management may be necessary in childhood peptic ulcer complicated by hemorrhage or perforation. —Authors' Summary and Conclusions.

**342. RUNGE, GRETCHEN H.** (Austin State Sch., Texas) **Glucose tolerance in mongolism.** Amer. J. ment. Def., 1959, **63**, 822-828. The purpose of this study was to determine whether the abnormalities in carbohydrate metabolism in mongolism are influenced by age. The subjects were mongoloids of a wide range in intelligence and chronological age. Among the results it was found that the glucose tolerance test was abnormal in over 52% over the age of six years, the abnormality being progressively greater with increasing age. The author felt further research was indicated to support the theory that abnormal glucose metabolism in mongolism may be on the basis of a metabolic abnormality and be progressive with age, and that the metabolic abnormality is possibly reflected more by the liver than by other organs. —J. W. Fleming.

**343. TUFFY, PHILOMENA, BROWN, AUDREY K., & ZUELZER, WOLF W.** (Child Res. Center, Detroit, Michigan) **Infantile pyknocytosis.** Amer. J. Dis. Child., 1959, **98**, 227-241. The regular occurrence of small numbers of distorted and contracted erythrocytes or burr cells in the blood of apparently normal full-term infants and especially in premature infants is described. The term "pyknocytes" is proposed for these erythrocytes. The percentages range from 0.3%-1.9% in full-term infants and 1.3%-5.6% in premature infants. In both groups the number of these cells increases with age up to at least 2-3 months. Eleven cases of a hemotologic entity are described which seem to be an accentuation of the physiologic presence of pyknocytes in early life and is characterized as an acute severe hemolytic anemia, in which up to 50% pyknocytes are found. The term infantile pyknocytosis is proposed for this entity. It is not associated with demonstrable renal or hepatic disease, ingestion of toxic substances, or as a rule, Heinz body formation. It is one of the conditions associated with neonatal hyperbilirubinemia. It is transient and responds to transfusion therapy. Its development appears to be age-determined but there is a strong probability that racial and genetic factors play a part. —Authors' Summary and Conclusions.

**344. WILSON, MIRIAM G.** (Univer. of California Med. Center, Los Angeles), **HEINS, HENRY L., IMAGAWA, DAVID T., & ADAMS, JOHN M.** **Teratogenic effects of Asian influenza.** J. Amer. med. Ass., 1959, **171**, 638-641. Hemagglutination-inhibition titers for Asian influenza were determined in March, April and May of 1958 on 126 expectant mothers whose last menstrual periods occurred in October, November and December of 1957. There were 75 mothers with positive titers and 51 with negative. Comparison of the two groups showed no significant teratogenic effect and the two groups did not differ significantly with respect to the incidence of anomalies among the children delivered. —I. Altman.

**345. WILSON, MIRIAM G.** (Univer. of California Med. Center, Los Angeles), & **MIKITY, VICTOR G.** **A new form of respiratory disease in premature infants.** *Amer. J. Dis. Child.*, 1960, **99**, 489-499. Five cases of respiratory disease of unknown etiology have been described in premature infants. The distinguishing characteristics included, in all cases, the gradual development of dyspnea, early and striking diffuse involvement of the lungs radiologically, and, in some, subsequent interstitial fibrosis and cor pulmonale. —Authors' Summary.

**346. WINEBERG, JULIUS J.** (St. Therese's Hosp., Waukegan, Ill.) **Idiopathic hypercalcemia of infancy.** *Amer. J. Dis. Child.*, 1959, **98**, 792-795. A case of idiopathic hypercalcemia of infancy has been presented. This is a recently described disease occurring before the first year of life. It is characterized by anorexia, vomiting, failure to gain weight, and high serum calcium. Its etiology is unknown, but it clinically and biochemically resembles vitamin D overdosage. This condition is self-limited and responds to treatment. A low-calcium diet, elimination of vitamin D, and a high-phytate diet are the treatments of choice. Cortisone has been found to be very effective and is useful in severe cases. —Author's Summary.

**347. WINKELMAN, RICHARD K.** (Mayo Clinic, Rochester, Minn.), & **PERRY, HAROLD O.** **Herpes zoster in children.** *J. Amer. med. Ass.*, 1959, **171**, 876-880. Herpes zoster has been considered a rare disease in children, but these authors feel it may be encountered frequently. Clinical observations are presented for 7 children, aged 7 months to 5 years, none of whom had been exposed to the virus before the onset of illness. Five had had chickenpox in the first year of life. The disease was like that in the adult except that postherpetic neuralgia did not occur. Local treatment of the skin was sufficient. Roentgenologic therapy is warned against. —I. Altman.

**348. WORTHEN, HOWARD G., VERNIER, ROBERT L., & GOOD, ROBERT A.** (Univer. of Minnesota, Minneapolis) **Infantile nephrosis.** *Amer. J. Dis. Child.*, 1959, **98**, 731-748. The clinical and pathologic features of 12 children who developed nephrosis within the first year of life are presented. The symptoms, physical findings, and laboratory abnormalities were essentially the same as those of idiopathic childhood nephrosis. However, the cases of infantile nephrosis were characterized by a high familial incidence, refractoriness to treatment, and a high mortality rate. . . . The possible etiologic factors are discussed, with emphasis on the possible role of maternal toxemia. We conclude that the autoimmune mechanisms, which have been given etiologic importance in childhood nephrosis, probably can not be implicated as the cause of infantile nephrosis. Further, the results of this study do not support the suggestion of other investigators that a metabolic defect, associated with crystalline deposits in the kidney, is the cause of infantile nephrosis. —From Authors' Summary and Conclusions.

## PSYCHOLOGY

**349. ALBERT, ROBERT S.** (Mass. Mental Health Center, Boston) **The function of verbal labels in the discrimination of subtle stimulus differences.** *J. genet Psychol.*, 1959, **94**, 287-296. 25 children, 7 to 10 years old, and 13 college students were presented six differently weighted cylinders singly in series. Judgments of heavier or lighter than the preceding weight were obtained. In a second procedure Ss closed their eyes and were presented four cylinders between which there were no JNDs, while E verbalized a label which S repeated. S then sorted four critical stimuli on cardboard squares on which the labels were printed. For both children and adults, labelling eliminated differences between good and poor discriminators on the first procedure. Children performed better than adults with labelled stimuli. —J. W. Fleming.



350. ANNETT, MARIAN. (Warneford Hosp., Oxford) **The classification of four common class concepts by children and adults.** Brit. J. educ. Psychol., 1959, 29, 223-236. This study traces some aspects of growth of four common class concepts by analyzing the sorting and explanations in grouping pictures of common objects by 303 children, aged 5 to 11 years, and 42 adults, aged 18 to 73 years. Few directions were given the subjects in classifying (animal, plant, vehicle, furniture) a group of 16 common objects. Methods of classification were appraised in relationship to age and intelligence. The results showed the number of combinations in sorting was reduced with age; the sorts of facts found noteworthy about the objects do not change with age; growth differences were principally related to the way facts were used in relating objects together; the order of development was through explanation, enumeration, contiguity, similarity, and class name; no stage-age relationship appeared. Older adults perform more like children than younger adults. —W. D. Smith.

351. BACHER, F. **Electroencéphalographie et psychologie différentielle.** (Electroencephalography and the psychology of individual differences.) BINOP, 1959, 15, 94-100. A review of articles on correlations between EEG and intelligence, personality, or other psychological characteristics. Some of the 25 references call attention to articles in less well known journals. —S. G. Vandenberg.

352. BARDECKI, ADAM. **Porównania części i całości w mowie i myśleniu.** (The child's appreciation of the relation of part and whole.) Psychol. Wychowawcza, 1959, 2, 385-399. In order to check on the results of research conducted by Jean Piaget and Alina Szeminska on comparisons between a part and the whole of a collection by children, the author carried out two kinds of experiments. In the first one which embraced 16 children at the age between 3 years 6 months and 9 years 8 months, he used pictures representing concrete objects and asked the children questions which differed in some points from Piaget's questions ("Of what is there more: brown beads or wooden ones?"; while all were wooden beads most of which brown with some white ones): the author's questions concerned the smaller part of the whole, and while mentioning the objects which were a part of the whole, he added the word "only" and when he referred to the entire collection—the word "all" (e.g., "Of what is there more, only boys or all the children?"). It turned out that such a type of modification had no influence on the quality of the answers given by the children. Operative thinking could be found only in the case of three of the oldest children. The remaining 13 children compared both parts of the divided collection and not the given section with the whole collection. This confirms the results obtained by Piaget and Szeminska. In the second experiment the author did not use any concrete objects, but only asked similar questions, as, e.g., "Are there more pigeons or more birds?" Out of 14 children under investigation 9 answered correctly all the questions. Further investigation, however, revealed that the children gave an incorrect justification for the correct answer, making the same kind of mistake as in the case of concrete examples. Thus, this part of the experiment also confirmed Piaget's thesis about the inability of young children to think on the operational level. —English Summary.

353. BARNETT, CHARLES D., ELLIS, NORMAN R., & PRYER, MARGARET W. (State Colony & Training Sch., Pineville, La.) **Stimulus pretraining and the delayed reaction in defectives.** Amer. J. ment. Def., 1959, 64, 104-111. 80 mentally retardates, ranging in MA from 5-7 to 9-0 and having a mean CA of about 16, were divided into two groups. One group was given pretraining which involved learning distinctive names for a pair of stimuli. The second group was required merely to discriminate between them. In a delay test situation, all Ss received six trials under each of four delay intervals. Ss who had learned names performed significantly better than those who did not learn names, a superiority that was present for both high and low levels of MA. Significantly more correct choices followed a 10 sec. delay than followed a 30 sec. 1 min., or a 5 min. delay. The results are seen as lending some support to the view that possession of verbal names for stimuli allows the retardate to represent the absent stimuli during the delay interval. —From Authors' Summary.

- 354. BECK, HARRY S.** (Univer. of Virginia) **A comparison of convulsive organic, non-convulsive organic, and non-organic public school children.** *Amer. J. ment. Def.*, 1959, **63**, 866-875. 29 nonorganic, 60 convulsive organic, and 71 nonconvulsive organic children, mean age approximately nine, were compared with respect to such things as intelligence, developmental problems, behavior ratings, and ages of sitting, standing, walking, speaking, weaning and toilet training. Data were collected by means of the WISC, Bender-Gestalt, and referral blanks and health histories submitted by the schools. Extensive group specific characteristics and intergroup differences are listed in summary. —J. W. Fleming.
- 355. BOBROFF, ALLEN.** (Univer. of Michigan, Grand Rapids) **The stages of maturation in socialized thinking and in the ego development of two groups of children.** *Child Developm.*, 1960, **31**, 321-338. The study was designed to explore the sequential levels of thought and behavior associated with the development of socialization in two groups of young children. 32 children of normal intelligence were selected for participation in the study along with 32 children classified as educable retardates. The subjects' levels of social maturity were assessed from two points of view. First, the children were evaluated in terms of Piaget's categories of practice of rules and consciousness of rules. Second, the corresponding phases of ego development in the same children were examined by analyzing TAT protocols. The ego development concept is rooted in psychoanalytic psychology. The empirical relationship between growth in the Piaget framework and in ego development was expressed in descriptions of observed levels of development in each area. In the aggregate analysis the groups of children were found to be in concomitant stages of progress in the areas studied. Overlapping of stages appeared in varying degrees for different subjects. The normal and mentally retarded groups were found to progress through the same sequence of developmental stages. However, a significantly large number of children in the educable mentally retarded group were classified into lower stages of development than the normal children of similar mental age. —Author's Summary.
- 356. BRIDGES, CECIL.** **Nomographs for computing the "validity" of WISC or Wechsler-Bellevue short forms.** *J. consult. Psychol.*, 1959, **23**, 453-454. Nomographs for computing the correlation of WISC and Wechsler-Bellevue short forms of two to four, and five to seven, subtests with the whole scale score, are presented. —E. E. Levitt.
- 357. BROEN, WILLIAM E., Jr.** (Univer. of California, Los Angeles) **Anxiety, intelligence, and achievement.** *Psychol. Rep.*, 1959, **5**, 701-704. The relation of anxiety to intelligence test performance and achievement was studied in order to evaluate the utility of procedures designed to suppress testee anxiety in intelligence test situations. It was concluded that anxiety is a variable which, because it has similar effects on intelligence test performance and achievement, aids in the prediction of achievement. Because of this, procedures for suppressing anxiety during intelligence testing are seen as decreasing the relationship between intelligence test performance and school achievement. —Author's Summary.
- 358. BRONFENBRENNER, URIE.** (Cornell Univer., Ithaca, N.Y.) **Freudian theories of identification and their derivatives.** *Child Developm.*, 1960, **31**, 15-40. A critical analysis of theories of identification, first as developed by Freud and later modified by Mowrer, Sanford, Sears, and Parsons, together with a consideration of their empirical validity.
- 359. BROWN, ROGER, & BERKO, JEAN.** (Mass. Inst. of Technology, Cambridge) **Word association and the acquisition of grammar.** *Child Developm.*, 1960, **31**, 1-14. In a word-association test adults usually provide response words belonging to the same part-of-speech as the respective stimulus words whereas very young children usually provide responses differing in part-of-speech from the stimuli. It is hypothesized that the changing character of the child's word associations is a consequence of his gradual organization of vocabulary into the syntactic classes called parts-of-speech.

To determine the degree to which S has accomplished this latter task a Usage Test was designed. In this test a new word is used so as to indicate its part-of-speech membership and S is then asked to create sentences using this new word. A performance is scored as correct if S has used the word in ways permitted by its part-of-speech membership. Four groups of Ss (adults, and first, second, and third grade children) were given the Usage Test and also a Word Association Test and it was found that the tendency to give associations belonging to the part-of-speech of the stimulus word was closely related to correct scores on the Usage Test. The performances are both manifestations of the child's developing grasp of syntax. —Authors' Abstract.

**360. BUDOHOSKA, WANDA. Reprodukcia szeregu w kierunku wstecznym u dzieci i osób dorosłych.** (Reproduction of a series of syllables backwards by children and adults.) Psychol. Wychowawcza, 1959, 2, 29-34. The purpose of this work was to find out whether reproduction backwards of a number of syllables without any sense is the result of reversing the succession of elements that present associations in one direction. The examination embraced 60 children and 60 adults. The persons under survey were divided up into six groups (10 children and 10 adults). Each person learned by heart two lines of nonsense syllables. One line, after it was mastered, was reproduced by a person in reverse order and the other row, learned by heart after two weeks was reproduced in the way it had been learned. Each group learned a list of differing length (from 4 syllable lines to 19 syllable ones). The number of correct reproductions as well as the time needed for the reproduction was measured. The relative number of correct reproductions in reverse order as compared with the number of reproductions in the original order is with children higher than with adults and does not decrease in the case of a longer line, while it decreases in the case of adults. The relative time needed for reproduction in reverse order, as compared with the time needed for reproduction in the original order is with children shorter than with adults and does not increase in case of a longer line, while it increases in the case of adults. The results testify to the fact that the mechanism of reproduction of lines in reverse order is different with children as compared with adults. Research conducted with children shows that reproduction of a line in reverse order is not the result of reversing the order of the elements associated in the original order. But the results achieved in investigations of adults can be interpreted in this way. The supposition arises that difficulties in the reproduction of lines in reverse order observed with adults can be the consequence of habits acquired during the course of life. This problem requires further investigation. —English Summary.

**361. CANTOR, GORDON N., & GIRARDEAU, FREDERIC L.** (George Peabody Coll., Nashville, Tenn.) **Rhythmic discrimination ability in mongoloid and normal children.** Amer. J. ment. Def., 1959, 63, 621-625. 44 mongoloids, mean CA of 12-4 and mean MA of 4-4, and 24 non-retarded, mean CA of 4-8 and mean MA of 5-6, were exposed to 60 presentations of eight metronome beats, 30 at a rate of 120 beats per min. ("fast") and 30 at 88 beats per min. ("slow"). Half of each group were required to tap with the metronome beats. The task was to identify each stimulus presentation by means of the proper label. Both mongoloid and normal groups did significantly better than would be expected by chance, but the normals significantly exceeded the mongoloids in performance, although the normal group had an MA level significantly above that of the mongoloids. The presence or absence of tapping had no significant effect on performance. The results call into question the commonly expressed generalization that mongoloids are characterized by a "marked" sense of rhythm. —From Authors' Summary.

**362. CATTELL, RAYMOND B., & PETERSON, DONALD R.** (Univer. Illinois, Urbana) **Personality structure in four and five year olds in terms of objective tests.** J. clin. Psychol., 1959, 15, 355-369. (1) 81 behavioral response measures on objective tests chosen to mark, with suitable modification, factors known in older subjects, and covering the general personality sphere, have been factored on 80 4 or 5 year olds, yielding 20 factors revealing a simple structure significant at the  $P = .05$  to  $= .01$  level. (2) Omitting inferences from loadings on a dozen variables of low reliability

the loading patterns in the remainder can be matched with older child and adult personality factor patterns U. I. 16 through 35, leaving only U. I. 27, 31 and 33 unmatched in the standard replicated personality factor series, and only numbers 10 and 13 unmatched in the present series. Number 13 is virtually only a doublet, but 10 is a new factor of definite psychological consistency, called Critical Restraint. (3) The matching is very definite in 14 factors, in that: (a) all markers are present, most with non-hyperplane loading, and all with correct sign, (b) no truly competitive alternative match exists on either side, and (c) the new, non-marker variables fit the psychological sense of the factor as previously hypothesized. However, in four others the matching can be considered only tentative, and in all there is a tendency for the marker pattern to appear with reduced variance, probably showing greater variance loss than in previous cross validations confined to groups of the same age as that on which the factors were first recognized. Also, the general rank order of variance magnitude of the factors is only slightly related to that in adults. Accordingly, we may tentatively conclude that there are systematic changes in the factor pattern emphasis between four years of age and adulthood, though the number and nature of the factors stays remarkably constant. (4) To check the identifications it is desirable that this study be independently repeated on a new 4-5 year old sample, but it would be valuable to do this while: (a) increasing the length of tests which proved deficient in reliability, (b) shifting the matching emphasis in determining relation to the present study to new variables found loaded higher here than at upper ages, (c) examining the hypotheses by inserting new tests aimed at the essence of present factors, and, (d) observing the agreement of the present nursery school group modification from the adult-marker patterns with the modifications that appear in our study of 7 and 8 year olds, now in process of publication. The factors checked here—but especially the general anxiety factor U. I. 24, the general neuroticism factor U. I. 23, and the extraversion-introversion factor, U. I. 32—should provide a useful basis of determinate, uniquely-defined measures for those concerned with studies of personality development in early childhood. A best possible battery for 12 factors has been put together from the tests in the present research, and will be made available to clinical researchers on request. —Authors' Summary.

**363. COHEN, JACOB. The factorial structure of the WISC at ages 7-6, 10-6, and 13-6.** *J. consult. Psychol.*, 1959, **23**, 285-298. The WISC standardization data for the age groups 7-6, 10-6, and 13-6 were factor-analyzed by group, using complete centroid extraction, oblique rotation to a criterion of simple structure and a positive manifold, and a second-order general factor analysis. The proportions of the variance attributable to the general factor, communality, specificity, and error were compared both among the children's groups and with adults' WAIS performance. The following conclusions were drawn: Five correlated factors were found consistently in the three children's age groups: Verbal Comprehension I and II, Perceptual Organization, Freedom from Distractibility, and a quasi-specific factor. These are essentially the same factors which were found for adults on the WAIS. A second-order general factor, G, accounted for about one-third of the total variance and about one-half of the true variance of the WISC. This factor has a very similar loading pattern to its adult counterpart, being measured best by the essentially verbal subtests. Subtest specificity is relatively small, which renders invalid the clinical rationales which are dependent on distinctive measurement functions of the 12 subtests. This again duplicates the findings on the WAIS. It was found that children exhibit a substantially smaller degree of generality of intellectual functioning than do adults. This is directly counter to the widely held belief that intelligence in children is highly general and differentiates progressively as they grow to maturity. Finally, from an analysis of the sources of score variance, each subtest's measurement function was discussed in terms of G, the primary factors, specificity and measurement error. It was found, with some exceptions, that single subtest scores do not lend themselves to individual interpretation. Similar analysis of the IQs revealed the fact that both the Verbal and Full Scale IQs are excellent measures of G. Some factor scores were proposed, and the manner of their utilization was described. —Author's Abstract.

364. COLLEMAN, R. D. (Royal Eastern Counties Hosp., Colchester, Essex, England) **The galvanic skin responses of mentally retarded and other children in England.** *Amer. J. ment. Def.*, 1959, 63, 626-632. The object of the research was to investigate the differences between GSR's of mentally retarded, dull, normal, and bright 13- and 14-year-old boys and girls. The 827 subjects, selected at random from schools, ranged in IQ from 45 to 140. GSR was expressed as a percentage decrease of resting skin resistance. Among the many findings, there were no significant sex differences in any group in mean resting skin resistance, although the mean resting level for the retarded and dull groups were each significantly larger than those for the normal and bright. There were no significant sex differences in mean GSR's in any group to either the warning or the actual stimuli. The mean GSR's of the dull and normal groups to both types of stimuli were significantly greater than for either retarded or bright groups, there being no significant difference between the means of the latter two groups. In so far as GSR is an indicator of autonomic activity, then subjects in the 75 to 104 IQ range are most reactive, with the effect becoming smaller on each side of the maximum. —From Author's Summary.

365. COOPER, JOSEPH B., & BLAIR, MARGARET A. (San Jose State Coll., California) **Parent evaluation as a determiner of ideology.** *J. genet. Psychol.*, 1959, 94, 93-100. A scale for measuring parent evaluation was administered to 179 male and female college students aged 17 to 30. Measures of ideology were obtained from Gough's E-F scale, administered under three instructional sets: self, mother, and father. Ss who gave a parent a relatively high evaluation evidenced relatively close ideological similarity to that parent. —J. W. Fleming.

366. CRANDALL, VAUGHN J., PRESTON, ANNE, & RABSON, ALICE. (Fels Res. Institute, Yellow Springs, Ohio) **Maternal reactions and the development of independence and achievement behavior in young children.** *Child Develpm.*, 1960, 31, 243-251. The investigation was concerned with correlates and antecedents of young children's achievement behavior. 30 nursery school-age children and their mothers were studied. The children were observed in nursery school free-play and rated for (a) amount of achievement efforts, (b) help-seeking from adults, (c) emotional support-seeking from adults, and (d) approval-seeking from adults. The children were observed in their homes in interaction with their mothers and rated on the same four variables. Finally, the mothers' reactions to the children's behaviors were assessed. Analysis of associations between these three sets of ratings produced the following results: (a) High achieving children were less dependent on adults for help and emotional support. (b) The children's behaviors were moderately, but demonstrably, consistent from home to nursery school. (c) Mothers who frequently rewarded achievement efforts were less nurturant but no more or less affectionate than mothers who were less prone to do so. (d) Neither maternal affection nor independence training was predictive of the children's achievement behavior while direct maternal rewards of achievement efforts and approval-seeking were. —Authors' Summary.

367. CROMWELL, RUE L., & MOSS, JAMES W. (George Peabody Coll., Nashville, Tenn.) **The influence of reward value on the stated expectancies of mentally retarded patients.** *Amer. J. ment. Def.*, 1959, 63, 657-661. The problem investigated is whether the value of an event influences the S's expectancy that the event will occur. 80 mentally retarded persons, CA 9-7 to 26-6 and IQ 42 to 88, were each presented a card guessing task under three different conditions. The task in all conditions was to guess the color of each card as it appeared in a series of 80 cards. The Ss knew that 40 cards were black and 40 yellow. In the first condition guesses were not rewarded, but in the next two conditions a particular color always brought a reward regardless of the S's responses, as well as a reward for guessing correctly. The two final conditions differed in terms of high and low reward. Both the high and low reward conditions brought significantly more guessing of the valued card than expected by chance but did not differ significantly from each other. Although Ss



guessed accurately better than chance, there was no differential accuracy with respect to cards of particular value or color. —J. W. Fleming.

**368. CROWELL, DAVID H.** (Univer. of Hawaii), **PETERSON, JOHN, & SAFELY, MARY ANNE.** *An apparatus for infant conditioning research.* Child Developm., 1960, **31**, 47-51. Description of design and operation of unit for neonatal and infant conditioning research. Schematic circuit presented which includes following components: experimenter's control box, Hunter Decade-Type Electronic Interval Timers, rectifier box, Grass Model 3C Physiological Research Stimulator, boot board, and Brush Oscillograph. Apparatus permits controlled administration of CS-UCS and objective recording of UCR and CR. —Authors' Abstract.

**369. DAMBORSKÁ, M., BLAŽKOVÁ, E., & STĚPÁNOVÁ, P.** *Rozvoj zraku u ústavních dětí během prvních měsíců života.* (The development of vision in institutionalized infants during the first months of life.) Cesk. Pediat., 1959, **14**, 914-919. The development of vision has been followed in 180 infants up to three months of age, with individual stages determined, in a children's home. The concept of "early fixation" has been precisely defined and compared with "convergence alone," "vision dominance," "visual concentration," and "social behaviour." Early fixation appeared in this group between the 10th and 26th day, fixation on the face of a nearby adult by 4 weeks, fixation on toys at 8 weeks, blinking on approximating toys to the child's face at 6 weeks, following of movements of toys within a visual angle of 90° by 4 weeks, in an angle of 180° by 8 weeks. These observations on early fixation, fixation and blinking on approximation are in agreement with those of Kasatkin. The ability to follow a toy in movement shows significant differences in our data as compared with the data reported by Gesell. —English Summary.

**370. DAMBORSKÁ, M., FILOVÁ, V., & STĚPÁNOVÁ, P.** *Rozvoj sluchu u ústavních dětí.* (The development of hearing in institutionalized infants.) Cesk. Pediat., 1959, **14**, 911-913. In a children's home the development of hearing was followed in a group of 180 children up to three months of age with a view to determining stages: (1) stage of the surprise reaction (up to 4 weeks); (2) stage of the auditory dominants (4 to 8 weeks); (3) stage of the auditory differentiation with a beginning of recognition of accent; (4) stage of beginning coordination of eyes, neck muscles and hearing (2-3 months). Attention is called to large individual differences in auditory reaction in completely normal children, and the dependence on position (on its back or sitting). —English Summary.

**371. DENENBERG, VICTOR H.** (Purdue Univer., Lafayette, Indiana), & **BELL, ROBERT W.** *Critical periods for the effects of infantile experience on adult learning.* Science, 1960, **131**, 227-228. Mice were shocked with 0.1, 0.3, or 0.5 ma of current at 2 to 3, 8 to 9, or 15 to 16 days. Handled, nonshocked and nonhandled controls were also used. In adulthood each group was split into thirds and taught an avoidance response under shock of 0.3, 0.5, or 0.7 ma. The amount of shock given during infancy and adulthood, and the age at which shock occurred, were all found to have significant effects upon learning. —Abstract.

**372. DUNN, LLOYD M., & HARLEY, RANDALL, K.** (George Peabody Coll., Nashville, Tenn.) *Comparability of Peabody, Ammons, Van Alstyne, and Columbia test scores with cerebral palsied children.* Except. Child., 1959, **26**, 70-74. The Peabody, Ammons Full-Range, and Van Alstyne Picture Vocabulary Tests, and the Columbia Mental Maturity Scale were administered within two weeks to 20 children with various types and degrees of cerebral palsy. The mean CA was 11-0. Teachers ranked the Ss on reading and arithmetic achievement. The Peabody was found to have the most and the Columbia the least bottom of the four tests. The alternate form reliability coefficient was .97 for the Peabody, and .86 for the Ammons. Intercorrelations among MA scores on all four tests exceeded .80. Intercorrelations of teacher rankings of reading and arithmetic achievement and MA scores were .80 and above. It was concluded that all four tests can be used successfully with cerebral

palsied children in predicting school success, and that the Van Alstyne should be used only for children of MA below 8-0, and the Columbia for children above 4.0. — J. W. Fleming.

**373. DURKIN, DOLORES.** (Teachers Coll., Columbia Univer., New York City) **Sex differences in children's concepts of justice.** *Child Developm.*, 1960, **31**, 361-368. This investigation was an attempt to extend the work of Piaget by examining sex differences in children's concepts of justice. Like the Piaget study, behavioral violations of rights regarding one's person were depicted in brief stories; unlike his study, however, violations regarding one's property and character were also depicted. Boys and girls ( $N = 190$ ) of lower- and middle-class backgrounds, and of three different grade-levels, were systematically questioned about the stories in individual, tape-recorded interviews. Chi square tests were used to analyze the data, and in each of these tests the null hypothesis of no relationship between sex and type of response remained tenable. —Author's Abstract.

**374. EHRLICH, ANNETTE.** (McGill Univer.) **Effects of past experience on exploratory behaviour in rats.** *Canad. J. Psychol.*, 1959, **13**, 248-254. The effects on exploration of differential rearing conditions and of immediate past experience were studied and, in addition, the factor of maze complexity was varied by utilizing two tests, a Y maze and a Dashiell maze. Early handling significantly increased exploration in both mazes, and there was a tendency, although not significant, for rats reared in a restricted environment to explore more than rats reared in a free environment. Maze complexity did not affect the results. Although previous experience in one maze did not affect performance in the other maze, exploratory activity declined with time, both within and between trials in the same maze. The results justify the statement that a rat's response to a novel situation is dependent upon its past history, both in terms of early experience and in terms of previous exposures to the same situation. —Summary and Conclusions.

**375. ESTVAN, FRANK J.** (Univer. of Wisconsin, Madison) **Studies in social perception: word productivity.** *J. exp. Educ.*, 1959, **28**, 37-63. 88 first- and sixth-grade boys and girls from urban and one-room rural public schools were asked to respond to 14 pictures, were subsequently interviewed and given the Binet. Word Productivity, i.e., number of words in response to the pictures, was not significantly correlated with IQ, MA, Vocabulary score, or Word Fluency score. When only the high and low IQ groups were compared, the high group was significantly higher in Word Production. Productivity of urban and rural groups was not significantly different. Sixth graders were more productive than first graders; sixth graders and the high-intelligence group were most productive on the adult and remote-experiences pictures, whereas the first graders and the low-intelligence group were most productive on the child-experience pictures. —A. H. Roden.

**376. FAUST, MARGARET S.** (Scripps Coll., Claremont, Calif.) **Developmental maturity as a determinant in prestige of adolescent girls.** *Child Developm.*, 1960, **31**, 173-184. In order to determine whether physical maturity is a determinant in prestige of adolescent girls, Guess Who test scores of 731 girls in sixth, seventh, eighth, and ninth grades were analyzed in terms of the girls' level of physical development. On the basis of menarcheal age scores, the girls were classified into four developmental groups. While CA differences within each grade were not significantly correlated with Guess Who test scores, an analysis based upon developmental groups revealed that the physically mature girls were consistently seen as having older friends and as being more grown up than their classmates. By means of the binomial test it was determined that prestige and the traits significantly correlated with prestige were most frequently ascribed to sixth grade girls who were "prepuberal," while in all three junior high school grades girls who were physically accelerated received the preponderance of favorable reputation scores. A discrepancy between rate of developmental change and rate of change in prestige-lending evaluations during adolescence

was noted and was interpreted in terms of the different meaning which early and late development has for girls at different times during adolescence. —Author's Abstract.

**377. FAVERGE, J. M. *Sur la notion de contingence.*** (About the concept of contingency.) *BINOP*, 1959, **15**, 75-84. It is not possible to define a meaningful index of contingency between just any two distributions if both have an arbitrary number of categories. If some restraint exists on the location of a given data point in one categorical (qualitative) distribution when the location in the categories of the second variation is fixed, there may be a meaningful index of contingency. Three examples are given: (1) The two partitions are ordered. (2) The number of categories in one partition is fixed without arbitrary decisions. (3) The partitions for  $x$  and  $y$  correspond in a unique way, such as profession of father and profession of son, nationality and preference for a given nationality, stimulus and response. Formulas are given. —S. G. Vandenberg.

**378. FRANCIS, ROBERT J., & RARICK, G. LAWRENCE.** (Univer. of Wisconsin) ***Motor characteristics of the mentally retarded.*** *Amer. J. ment. Def.*, 1959, **63**, 792-811. 11 motor performance tests designed to measure strength, power, balance, and agility were administered to 284 mentally retarded children attending public schools. Ages ranged from 7-6 to 14-6 and IQ scores from 50 to 90. Comparisons were made with normative data on normal school children. The retardates were found to be markedly inferior to normal children in all motor performance tests, this difference increasing with advancing age. However, the general pattern of change by age and sex was similar to that reported on normal children. The intercorrelations among certain motor tests, as well as the correlations between intelligence and motor performance, were also similar to those found with normals. "The great differences . . . between the normal and the mentally retarded . . . clearly shows that the degree of motor retardation of these children is perhaps greater than had been previously supposed." —J. W. Fleming.

**379. FRENCH, JOHN W., & DEAR, ROBERT E.** (Educational Testing Service) ***Effects of coaching on an aptitude test.*** *Educ. psychol. Measmt*, 1959, **19**, 319-330. Students coached for the College Board Scholastic Aptitude Test were compared with students who received no special training in a series of studies. Significant but small differences were found in all three studies. The authors conclude "that an eager College Board candidate should not spend money on special coaching for the SAT." —S. G. Vandenberg.

**380. FRENCH, JOSEPH L.** (214 Manor Drive, Columbia, Mo.) ***Intellectual appraisal of physically handicapped children.*** *J. genet. Psychol.*, 1959, **94**, 131-141. The current status of appraising the intelligence of physically handicapped children is presented. Currently used tests, and their modifications, are discussed. A review of research indicates a need for a new power scale for this purpose. The initial standardization of the North Central Individual Test of Mental Ability is outlined. —From Author's Summary.

**381. GARDNER, D. BRUCE, & PEASE, DAMARIS.** (Iowa State Univer., Ames) ***The use of situational tests with preschool children.*** *J. Nursery Educ.*, 1958, **14**(1), 18-20. Two situational tests designed to shed light on the two-year-old child's approach to problems, to stress conditions, and to situations which require him to make a successful relationship with other people are described. The "Peg Frustration" consists of presenting a child with a board and pegs which fit into the openings. As he finishes placing pegs in the openings, the pegs are removed and replaced with a set of pegs slightly larger in diameter, which will not fit into the openings. The child is thus blocked from repeating the activity. This simple method helps discern various modes of approach to a frustrating blocking situation. In the "Stranger-Relationship" test the examiners leave the room and the mother follows, after reassuring the child that she will return in a moment. After 15 seconds, a woman, who is a stranger to the child, enters, sits down, and does not initiate any action. At the end of 60 seconds,



she arises, offers her hand to the child and says, "Shall we go find Mommy?" All the child's responses to being left alone and with a stranger are recorded by trained observers. No data are yet available. —G. R. Hawkes.

**382. GARDNER, ROBERT C., & LAMBERT, WALLACE E. (McGill Univer.)** *Motivational variables in second-language acquisition.* *Canad. J. Psychol.*, 1959, **13**, 266-272. Montreal high school students studying French as a second language completed a battery of tests including measures of linguistic aptitude, verbal intelligence, and various attitudinal and motivational characteristics. Analysis of the inter-correlations of these tests yielded two orthogonal factors equally related to ratings of achievement in French: a "linguistic aptitude" and a "motivational" factor. It was also found that maximum prediction of success in second-language acquisition was obtained from tests of: verbal intelligence, intensity of motivation to learn the other language, students' purposes in studying that language, and one index of linguistic aptitude. —Summary.

**383. GIBSON, DAVID, HEPHCOTT, ANNE E., & WILKINS, ROSEMARY.** (Ontario Hosp. Sch., Smiths Falls, Canada) *Academic success among high grade hospitalized mentally retarded children as a function of intelligence and etiological classification.* *Amer. J. ment. Def.*, 1959, **63**, 852-859. The subjects were 219 mentally retarded pupils in an institutional school setting. Data were extracted from case books on intelligence, etiology (endogenous, exogenous, and undetermined), years schooling prior to hospitalization, and academic progress in a variety of subjects. It was found that performance in arithmetic, grammar, and composition (language), as well as the correlation of IQ with school performance, varied with etiology. —J. W. Fleming.

**384. GODA, SIDNEY.** (Johnstone Training and Res. Center, Bordentown, N.J.) *Language skills of profoundly deaf adolescent children.* *J. Speech Hearing Res.*, 1959, **2**, 369-376. 56 subjects, 32 boys and 24 girls, between the ages of 12 and 18 at the Michigan State School for the Deaf were studied for the chief language skills of writing, speaking, lipreading, and reading. Deaf children who are superior in one skill will generally be superior in all skills. Deaf children who are inferior in one skill will generally be inferior in all skills. The qualitative and quantitative aspects of expressive language appear to be related. —M. F. Palmer.

**385. GOERTZEN, STANLEY M.** (2550 Buchanan, San Francisco, Calif.) *Factors relating to opinions of seventh grade children regarding the acceptability of certain behaviors in the peer group.* *J. genet. Psychol.*, 1959, **94**, 29-34. A 32 item scale was administered to 1733 seventh grade students in rural, suburban, and urban California communities. Each item described an unfavorable behavior, and responses to each item could range on a five-point scale from "have as friend" to "dislike or hate." High rank order correlations of the items among subgroups based on sex, age, birth order, intelligence, and social status were interpreted to indicate a high degree of similarity of opinion. —J. W. Fleming.

**386. GRAHAM, FRANCES K. (Univer. Hosp., Madison, Wisconsin), BERMAN, PHYLLIS W., & ERNHART, CLAIRE B.** *Development in preschool children of the ability to copy forms.* *Child Developm.*, 1960, **31**, 339-359. Changes with age in the ability to copy forms were studied in preschool children between 2½ and 5 years of age. The sample consisted of 108 children, in six half-year age groups, balanced for sex and for population group. Two methods of conceptualizing developmental changes were contrasted—a discontinuity approach emphasizing qualitative organizations typical of particular stages of development, and a continuity approach emphasizing quantitative changes in the accuracy of reproduction. The major findings failed to confirm predictions from the discontinuity theory. "Primitive" organizations of simplification and closure were more common in the reproductions of younger children, but they were no more common than the opposite characteristics of complication and closure. Both pairs of characteristics declined with age, but not differentially. In

contrast, accuracy of reproductions increased with age for each of eight characteristics judged and for each of 18 designs. There was no evidence of gaps or uneven development. It was suggested that the most meaningful general statement to be made about developmental changes in the ability to reproduce forms is that the reproductions increasingly approach the original in all dimensions and that, in the course of so doing, errors both of under- and overestimation occur. —Authors' Abstract.

**387. HAGGERTY, ARTHUR D.** (St. John's Episcopal Hosp., Brooklyn, N.Y.) **The effects of long-term hospitalization or institutionalization upon the language development of children.** *J. genet. Psychol.*, 1959, **94**, 205-209. Over a period of 5 years data were gathered on 100 seventh grade children who had spent an average of 3.5 years in some type of hospital or institution. Measures were oral speech samples, the vocabulary subtest of the WISC, and the Rorschach. The data are interpreted to indicate that their formal speech organization and over-all personality characteristics resemble those of schizophrenics. —J. W. Fleming.

**388. HARMS, IRENE E., & SPIKER, CHARLES C.** (Univer. of Iowa, Iowa City) **Factors associated with the performance of young children on intelligence scales and tests of speech development.** *J. genet. Psychol.*, 1959, **94**, 3-22. 80 children from 16 to 30 months were each seen for two sessions several days apart. Each session the child was administered the Kuhlmann and Cattell intelligence scales, and a 60 breath-unit sample of vocalization was obtained. Numerous results are presented relative to consistency of performance on the intelligence scales and on certain indices of speech development, the relationship between the two intelligence scales, and the relationships among the intelligence tests and speech indices. —J. W. Fleming.

**389. HARRIS, DALE B.** (Pennsylvania State Univer., University Park) **A note on some ability correlates of the Raven Progressive Matrices (1947) in the kindergarten.** *J. educ. Psychol.*, 1959, **50**, 228-229. The Raven Progressive Matrices (1947), the SRA Primary Abilities Test, and the Goodenough Draw-a-Man Test were administered individually to 98 kindergarten children, 45 boys and 53 girls, who were selected to represent the urban population of the United States by parental occupation. Age distribution for the sample is not given, other than the range of 5-1 to 6-1; however, the author states that, "Reference to test norms shows that this group is very close to typical performance for its age (5-6) on all measures." The total scores for the Draw-a-Man and Progressive Matrices, together with the Verbal Meaning, Perceptual Speed, Quantitative, Motor, and Space scores from the PMA were intercorrelated by sexes and with sexes combined. Only the latter are reported in tabular form since the author found no marked or consistent sex differences. Intercorrelations between scores on the Progressive Matrices, and the Draw-a-Man and Progressive Matrices scores were statistically significant but rather low (.22-.36). Correlations between and within the Draw-a-Man and the PMA are substantially higher than the correlation of the Raven with either of them. The author indicates some need for a revision of the directions for administration of the Progressive Matrices. —A. H. Roden.

**390. HARRIS, LUCY M., & SIEVERS, DOROTHY J.** (Columbus State Sch., Ohio) **A study to measure changes in behavior of aggressive mentally retarded adolescent girls in a permissive classroom.** *Amer. J. ment. Def.*, 1959, **63**, 975-980. The behavior of 18 adolescent mentally retarded girls with aggressive behavior problems was studied in a permissive classroom at a state institution. It was found that positive behavior tended to increase and negative behavior to decrease in the school room over a one to two year period. —From Authors' Summary.

**391. HEBER, RICK F.** (AAMD Tech Planning Project, 1601 W. Broad, Columbus, Ohio) **Motor task performance of high grade mentally retarded males as a function of the magnitude of incentive.** *Amer. J. ment. Def.*, 1959, **63**, 667-671. The purpose of this study was to determine whether mentally retarded subjects would respond differentially to variations in magnitude of incentive. The 36 subjects were institution-

alized, and ranged in age from 16 to 44 and in Binet IQ from 41 to 68. Two groups were matched on the basis of their best to three trials on the Seguin Form Board. The experimental task consisted of a one-third portion of the Minnesota Spatial Relations Test Board. High and low magnitude of reward objects were selected for each subject on the basis of individual preference rankings of a series of incentives. As measured by latency, the group performing under a highly preferred incentive condition did significantly better than the group performing under a less preferred incentive condition. When each of these groups was shifted to the opposite incentive condition, a significant decrement and increment, respectively, in performance took place. The results support the Hullian prediction that magnitude of incentive is a variable which affects performance rather than learning per se. —J. W. Fleming.

**392. HORN, DANIEL** (Amer. Cancer Soc., New York City), **COURTS, FREDERICK A., TAYLOR, ROBERT M., & SOLOMON, ERWIN S.** *Cigarette smoking among high school students.* Amer. J. publ. Hlth, 1959, **49**, 1497-1511. A study was made of smoking among high school students in Portland, Oregon, and the surrounding highly urbanized area. Two relatively independent factors were found that describe the groups with a high proportion of smoking: (1) a correspondence with family practices as indicated by parental smoking, and (2) a syndrome of personal factors characterizing inactive students (nonparticipants in extracurricular activities) who tend to be scholastically unsuccessful (older than their classmates) and with lower academic goals (not taking algebra as a college preparatory course). The significantly higher proportion of smokers found in the Catholic parochial schools is not accounted for by these factors. —Authors' Summary.

**393. HOROSZOWSKA, BEATRICE.** *Badania nad kształtowaniem się życzeń zawodowych młodzieży klas siódmych szkół podstawowych.* (Investigations on the vocational wishes of young people.) Psychol. Wychowawcza, 1959, **2**, 280-299. On the basis of an analysis of 5891 questionnaires collected in 1957 by three Vocational Advice Centres (psychological) in Warsaw schools and on the basis of comparisons with other Polish questionnaires (before and after the war) and also foreign polls, the authors reached the following conclusions: Among young people could be found a spontaneous trend towards certain vocational groupings and professions. In a questionnaire from 1957 80.9% of the boys expressed themselves in favor of the first 11 vocational groups (out of a total of 39) while the wishes of 76.5% of the girls were, above all, concentrated around 7 vocational groups. The boys as a rule choose technical professions (52% of the boys), mainly: engineer, radio-technician, electrician; the girls mainly choose the professions of a physician (13.7%) and a teacher (6.8%) as well as trade (mainly that of a dress-maker—9.7%). As regards the distribution of vocational wishes there can be found far-reaching similarities in all the analyzed Polish and foreign questionnaires. . . . The results of investigations testify to the fact that estimates as to the suitability for school and trade can not be based exclusively on the interests and wishes of the young people. . . . —From English Summary.

**394. HOWE, CLIFFORD E.** (Univer. of Illinois, Urbana) *A comparison of motor skills of mentally retarded and normal children.* Except. Child., 1959, **25**, 352-354. 43 mentally retarded and 43 nonretarded children, all from 6 to 12 years of age, were matched with respect to CA, socioeconomic background, and sex. The children were tested individually on 11 tests of motor skill. The nonretarded children were consistently superior. "Implications were drawn which suggest that a structured program of physical education may be a necessary part of the curriculum for the mentally retarded." —J. W. Fleming.

**395. HUNT, BETTY M.** (Columbus State Sch., Ohio) *Performance of mentally deficient brain-injured children and mentally deficient familial children on construction form patterns.* Amer. J. ment. Def., 1959, **63**, 679-687. The performance of three groups of mentally retarded children in constructing three-dimensional patterns from two-dimensional stimuli was investigated. The groups, matched with respect to MA, CA, and Binet IQ, differed in etiology: 30 Ss were brain-injured with a severe handicap in the visual motor area; 30 were brain-injured with a severe auditory

handicap and minimal visual motor disability; and 30 were familial. The first series of tasks involved 30 black snap blocks which could be fastened together to make objects represented by 20 black-white designs. The second series involved 24 one inch cubes and 12 right triangular blocks to complete 20 black-white designs. In general, the results showed the relative efficiency of the groups, from most to least, to be: brain-injured with auditory handicap, familial, and brain-injured with visual motor handicap. The results and discussion re-emphasize the "... difficulty and uselessness in trying to present a description of 'a typical brain-injured child.'" —J. W. Fleming.

**396. ILJIANA, G. A. On the formation of musical notions in preschool age children.** Vop. Psikhol., 1959, No. 5, 134-144. The present paper discusses the features of singing in preschool age children in the period when the notions about melody are formed in them. As has been shown by the investigation results, there is a definite order in the reflection of the various melody elements by the child's consciousness. Development of musical notions in children in this age group represents a process of splitting a complex object, i.e., melody, and unification of similar elements into corresponding groups. The child's notions about separate elements of the melody can be described as image schemes which come as components in the melody perception mechanism being developed. In the development of auditory notions about melody motor reactions of the vocal apparatus play their role. Initially, motor reactions which strengthen auditory impressions are of special significance, later on the child mainly resorts to motor methods for differentiating auditory impressions. —English Summary.

**397. IRWIN, ORVIS C. (Univer. of Wichita, Kansas) Correct status of final double consonant blends in the speech of children with cerebral palsy.** Cerebral Palsy Rev., 1959, 20(3), 10-12. The subjects were 160 children aged 2 to 17 tested on a list of 18 blends. Mean sex differences were not found but the variability of the girls was greater than that of the boys. Both chronological and mental age had little effect on the means of the scores. An analysis of the scores of 26 pairs of spastics and athetoids matched for age, sex, extent and degree of involvement showed no significant difference between the means or between the variances in the articulation of these blends. Concerning the effect of degree of involvement, the mean of the mild cases was statistically greater than that of the severe cases, but those between the mild and moderate and the moderate and severe were not significant. The variances were homogeneous. —I. Altman.

**398. IRWIN, ORVIS C. (Univer. of Wichita, Kansas) A sixth short consonant test for use with children with cerebral palsy.** Cerebral Palsy Rev., 1959, 20(2), 13-16. Templin's test of final double consonant blends was administered to 160 children with cerebral palsy ranging in age from 2 to 17 years. . . . The purpose of the study was to restandardize the Templin test of final double consonant blends for use with children with cerebral palsy. Seven criteria were employed in the analysis: (1) the reliability of the observer, (2) the reliability of the test, (3) the validity of the test, (4) difficulty of the items, (5) their discriminating power, (6) their uniqueness, and (7) chronological and mental age progression in the scores. All criteria except age progression were met. . . . The difference between the mean scores of those rated very good and those rated very poor on general language ability was significant at the .001 level; the mean  $r$  for discriminating power was .67, the range was from .49 to .87; the mean  $r$  for the uniqueness of items was .32, the range was from .04 to .68; chronological and mental age progressions in the articulation scores were not present. The Templin test of final double consonant blends, like the test on initial double consonant blends, appears to be quite adequate for use with children with cerebral palsy. —From Author's Summary.

**399. IRWIN, ORVIS C. (Univer. of Wichita, Kansas) Substitutions and omissions of final double consonant blends in the speech of children with cerebral palsy.** Cerebral Palsy Rev., 1959, 20(3), 6-7. Comparison was made between 44 cerebral

palsied children living in New England and 92 such children living in the deep South. Regional differences were found to be negligible. The differences between the mean scores for substitutions and for omissions in all cases was negligible, but the difference between the means of these errors for the New England cases was significantly in favor of substitutions. The most frequent substitution among final consonant blends was tr. The three most frequent omissions among these blends were sp, st, and sk. "Presumably these are the final blends in the speech of children with cerebral palsy with which the speech therapist might be mostly interested." —I. Altman.

**400. IRWIN, ORVIS C.** (Univer. of Wichita, Kansas) **Substitutions and omissions of initial double consonant blends in the speech of children with cerebral palsy.** *Cerebral Palsy Rev.*, 1959, 20(2), 10-12. The Templin initial double consonant blend test was administered to 102 children with cerebral palsy, aged 3 to 16 years, in speech and hearing centers. The mean score for articulating correctly the initial double consonant blends was 16.3, for the substitution errors it was 2.09, and for the omission errors, 4.41. These differences were significant. The 10 most frequent initial consonant blends for which other sounds were substituted are pl, thr, shr, gl, cl, tw, fr, bl, cr and pr. The 10 most frequent blends omitted are sp, st, sk, sn, sm, fl, sw, tw, and cr. —I. Altman.

**401. ISCOE, IRA, & GILLER, DONALD.** (Univer. of Texas, Austin) **Areas of concept formation in the mentally retarded.** *Amer. J. ment. Def.*, 1959, 64, 112-116. The hypothesis investigated was that abstracting ability is positively correlated with chronological age. Four groups of 15 institutionalized, "garden variety" retardates were selected to encompass an age range of about 10 to 45. MA scores were obtained by converting vocabulary scores of the Binet. Ss were administered the Rapaport modification of the Goldstein-Gelb-Weigl Object Sorting Test. Responses were scored on the basis of the open-closed, public-private dimensions developed by McGaughran. All groups utilized a closed system of conceptualization, regardless of CA. A graphic presentation of results indicates a decreasing number of public responses as age increases, although the authors seem to conclude otherwise. Comparisons with data obtained from nonretarded children are also made. —J. W. Fleming.

**402. JACKSON, PHILIP W., GETZELS, JACOB W., & XYDIS, GEORGE A.** (Univer. of Chicago, Illinois) **Psychological health and cognitive functioning in adolescence: a multivariate analysis.** *Child Developm.*, 1960, 31, 285-298. The relationship between psychological health and cognition in adolescence was examined using five psychological health criteria and eight types of cognitive performance. The subjects were 292 boys and 241 girls enrolled in a Midwestern private school. The major findings indicated that the relationship under question shows systematic variability with school grade, sex, psychological health criteria, and type of cognitive function. In particular, the interrelationship between sex differences and the role of pathological fantasy pose a series of promising research questions. A tentative theoretical framework was suggested for a number of the major findings. —Authors' Summary.

**403. JOHNSON, G. ORVILLE** (Syracuse Univer., N.Y.), & **CAPOBIANCO, RUDOLPH J.** **Physical condition and its effect upon learning in trainable mentally deficient children.** *Except. Child.*, 1959, 26, 3. This study was part of a larger research designed to measure the growth of trainable mentally retarded children as a consequence of class training. 27 children were classified as being in good, fair, or poor physical condition on the basis of medical and pediatric examination, supplemented by ophthalmological, otological, audiological, and neurological examinations where indicated. No significant differences in mean IQ among these groups were found. When pre- and posttest differences over a 20-month period were studied by means of the Vineland Social Maturity Scale, the Fels Child Behavior Rating Scale, and a Behavior Check List, there were no significant differences in degree of improvement among the three groups. —J. W. Fleming.

**404. KEN-ICHIRO, IMAMURA.** On conscience of Japanese junior high school students—their moral awakening. *Jap. J. educ. Psychol.*, 1959, 7, 79-83. Seventh and eighth grade students were surveyed with the "moral diagnosis" form, edited and published by Tanaka Educational Research Institute. It was found that a most important moral quality for preadolescents was to be "courageous." His second finding was that these youngsters have a somewhat better idea of what is bad than of what is good. The author reports that unfortunately "to be courageous" is often "regrettably mixed up with to be stubborn." (From English Summary)—A. Grams.

**405. KISTIakovskaia, M. I.** On the stability of visual reactions in children during first months of their life. *Vop. Psikhol.*, 1959, No. 5, 123-133. Materials obtained in observations and experiments have shown that in the presence of certain external impressions upon the child's visual analyzer a speedy development of visual reactions can be observed which finds its expression in greater frequency of their appearance, in the improvement of their motor structure, and in their increased duration. The conditions leading to the formation of stable visual domination in a newly-born child are analysed. In particular, the role of kinesthetic impulses is stressed. Some practical conclusions are drawn. —English Summary.

**406. KITANO, HARRY H. L.** (Univer. of California, Los Angeles) **Validity of the Children's Manifest Anxiety Scale and the Modified Revised California Inventory.** *Child Developm.*, 1960, 31, 67-72. The Children's Manifest Anxiety Scale and the Modified Revised California Inventory were administered to adjustment and regular class boys in the fourth, fifth, and sixth grades. The reliability of the anxiety scale was .86; that of the rigidity scale, .75. There were no significant mean differences between adjustment class and regular class children on the L scale or in socioeconomic status. Differences between mean scores of adjustment class and regular class boys were found to be significant at the .01 level. Higher correlations were obtained between anxiety, rigidity, and socioeconomic status when each variable was held constant through partial correlation. It was concluded that the finding of significant differences between adjustment and regular class boys on the Children's Manifest Anxiety Scale and the Modified Revised California Inventory provides evidence of their validity. —Author's Summary.

**407. KLAUSMEIER, HERBERT J., & CHECK, JOHN.** (Univer. of Wisconsin) **Relationships among physical, mental, achievement, and personality measures in children of low, average, and high intelligence at 113 months of age.** *Amer. J. ment. Def.*, 1959, 63, 1059-1068. Low (WISC IQ 55-80), average (90-110), and high (120+) intelligence boys and girls were compared on many variables by means of 16 measures. Among the findings, a low level of physical development, as well as uneven physical development, did not accompany low achievement in arithmetic and reading. Within child variability in strength, intelligence, reading, arithmetic, and language achievement was less for average girls than low boys and girls, and high boys; average boys were less variable than low girls and high boys; high girls were less variable than low girls. —J. W. Fleming.

**408. KLAUSMEIER, HERBERT J., LEHMANN, IRVIN J., & BEEMAN, ALAN.** (Univer. of Wisconsin) **Relationships among physical, mental, and achievement measures in children of low, average, and high intelligence.** *Amer. J. ment. Def.*, 1959, 63, 647-656. Three hypotheses were tested: a low level of physical development accompanies low achievement in arithmetic and reading; uneven physical development accompanies low achievement in arithmetic and reading; the within-child variability in strength, intelligence, reading achievement, language achievement, and arithmetic achievement is the same among children of low, average, and high intelligence. The subjects averaged about eight years of age. Height, weight, strength of grip, number of permanent teeth, and bone development of the hand and wrist comprised the physical measures. Other data were obtained by the WISC and the California Achievement Tests. The first hypothesis was upheld only for boys. The



second and third hypotheses were rejected. However, when the third hypothesis was retested using the three achievement measures indicated, no difference was found among the three levels of intelligence. —J. W. Fleming.

**409. KODMAN, FRANK, Jr., FEIN, ARTHUR, & MIXSON, ASHLEY.** (Univer. of Kentucky) *Psychogalvanic skin response audiometry with severe mentally retarded children.* Amer. J. ment. Def., 1959, **64**, 131-136. Response latency under two reinforcement schedules in a PGSR audiometric conditioning situation was determined for 31 institutionalized children with a mean age of 14 and mean IQ of 38. In addition, a subjective relative speech threshold was obtained by subjective speech audiometry. PGSR audiometry was effective in 28 of the cases, and a moderate positive correlation obtained between the GSR and speech thresholds. Response latency was on the order of one second. The two schedules of reinforcement produced no significant differences. —J. W. Fleming.

**410. KOGAN, KATE L.** (Univer. Washington Sch. Med.), & CRAGER, RICHARD L. *Standardization of the Children's Picture Information Test.* J. clin. Psychol., 1959, **15**, 405-411. The CPIT was administered to 400 children equally divided into eight six-month age interval groups between the ages of 2 and 6. The groups were selected so that they approached as closely as possible an optimal distribution of sex, age in months, and parents' occupation. Both mean and median total scores increased from each age group to the adjacent higher age interval. The discrimination between adjacent age interval groups on the basis of median score was statistically significant between the ages of 2½ and 5½. On the whole CPIT was not significantly related either to parents' occupation or sex within the age range studied. For 50 subjects selected from the standardization population the product moment correlation between CPIT and Revised Stanford Binet was .89; for 59 handicapped children from a variety of sources the correlation between CPIT and Revised Stanford Binet was .80. Test-retest reliability for a group of 50 subjects was .93; split-half reliability for one year age interval groups ranged from .85 to .90. Normalized standard scores were calculated for both six month and one year age interval groups. —Authors' Summary.

**411. KRAMER, C.** *Le test de Frustration de Rosenzweig.* (The Rosenzweig Picture Frustration Test.) BINOP, 1959, **15**, 85-93. A review of several French studies of the RPFT on a variety of types of subjects. Four tables are given with percentile and T-score norms based on 183 high school students and 189 students of lycea (junior colleges). —S. G. Vandenberg.

**412. KREVELEN, ALICE V.** (Grinnell College) *Stability of adolescents' judgments of an ambiguous figure after knowledge of others' judgments of same figure.* J. genet. Psychol., 1959, **94**, 23-27. 54 female campers, aged 13 to 15, 10 counselors-in-training, and 13 counselors in a summer camp were asked to estimate the length of a line. Later, false norms for each of these groups were announced and every subject asked to guess again. On the basis of percentages, adolescents were influenced about equally by the announced mean judgments of peers and counselors. Coincident with increasing age was a tendency to maintain original judgments, the percentages being 44, 70, and 77 for the above groups, respectively. —J. W. Fleming.

**413. LANGE, PATRICIA.** (Massachusetts Hosp. Sch. Crippled Children, Canton) *Frustration reactions of physically handicapped children.* Except. Child., 1959, **25**, 355-357. The Rosenzweig Picture-Frustration Study was administered individually to 40 congenitally handicapped and 40 acquired handicapped children five to 21 years of age. There were no significant differences between the two groups on any of the scoring categories. —J. W. Fleming.

**414. ŁAPKOWSKA, STANISŁAWA.** *Wpływ koedukacji na zainteresowania erotyczne uczniów.* (The influence of coeducation on the erotic interest of school-girls.) Psychol. Wychowawcza, 1959, **2**, 50-62. This work presents descriptive material related to the content of erotic interest of school-girls (mainly between 16

and 17 years) in coeducational and girls' schools. This material was taken from compositions on three subjects: (1) "My own characteristic." (2) "How I imagine my life to be in 3-5 years." (3) "Experiences which remained unforgotten." In each school the compositions on each of these three subjects were collected from approximately 120 school-girls. A total of 700 compositions were analysed. Comparing the number of statements of an erotic content in the compositions of the pupils of a girls' school with the number of those in a coeducational school, the author found a connection between the girls' interests and the type of the school. In a girls' school statements of an erotic content could be found in 78% of the compositions on the subject of the pupil's own characteristic, 88% in compositions on the subject of plans and dreams for the future and 83% in compositions on unforgotten experiences. However, in a coeducational school the respective figures are 48%, 57% and 30%. On the basis of these data the author reaches the conclusion that the development of erotic interest in a coeducational school takes place one or two years later than in a girls' school. —English Summary.

**415. LEVINE, SEYMOUR.** (Columbus Psychiatric Inst. & Hosp., Ohio) **The effects of differential infantile stimulation on emotionality at weaning.** *Canad. J. Psychol.*, 1959, **13**, 243-247. Three groups of newborn albino rats were stimulated by being shaken or moved about for 20 days. These procedures involved no handling. At 21 days of age these Ss were compared with non-stimulated control groups for differences in emotionality. The results revealed that the non-stimulated Ss exhibited significantly greater defecation in a novel situation than did either of the stimulated groups. In addition, the removal of the mother proved to have no effect on later emotionality. These results were interpreted as indicating the importance of stimulation in the absence of handling on physiological development and on development of differential emotional responsivity. —Summary.

**416. LEVINE, SEYMOUR.** (Columbus Psychiat. Inst. Hosp., Ohio) **Emotionality and aggressive behavior in the mouse as a function of infantile experience.** *J. genet. Psychol.*, 1959, **94**, 77-83. 60 mice were handled in infancy to determine the effects of infantile experience on emotionality and aggressive behavior later in life. Control groups received no handling. At 50 days of age a group of 12 handled mice was compared with a group of non-handled mice in response to an elevated runway. In addition, nine pairs of handled mice were compared with nine pairs of non-handled mice on latency to initiate a fight. Results on the runway indicated that handled Ss had significantly shorter latencies to initiate movement than non-handled controls. Handled mice had significantly shorter fighting response latencies than non-handled Ss. The results were interpreted as indicating that non-handled Ss have a lower threshold for emotional susceptibility than do handled ones, and that novel stimuli result in a heightened emotional arousal which is manifested by freezing in non-handled mice. —From Author's Summary.

**417. LIPMAN, RONALD S.** (Edward R. Johnstone Training & Res. Center, Bordentown, N.J.) **Some test correlates of behavioral aggression in institutionalized retardates with particular reference to the Rosenzweig Picture-Frustration Study.** *Amer. J. ment. Def.*, 1959, **63**, 1038-1045. Two groups of retardates, differing markedly in overt aggressiveness, were matched for age, sex, race, IQ, and socio-cultural background. The Children's Form of the Rosenzweig P-F Study, a frustrating mirror drawing task, and the CMAS were individually administered to the 50 adolescent Ss. Only the mirror drawing task significantly differentiated the groups, more behavior problem Ss refusing to continue with the task than model behavior Ss. —J. W. Fleming.

**418. LOVELL, K.** (Univer. of Leeds, England) **A follow-up study of some aspects of the work of Piaget and Inhelder on the child's conception of space.** *Brit. J. educ. Psychol.*, 1959, **29**, 104-117. In order to test Piaget's conclusions regarding the priority of haptic perception or topological space concepts over projective or euclidean concepts in children's development, 150 children between 2-11 and 5-8 of varied



socioeconomic and general ability backgrounds were examined by the Piaget type apparatus and procedures. Experiments carried out were classified as haptic perception, treatment of elementary spatial relations in drawing, linear and circular order, study of knots, and the projective straight line. Although children identified by haptic perceptions shapes displaying topological relationships more easily than they do euclidean shapes, it is argued that this greater recognition is not due to topological properties. Some general agreement with the data of Piaget and Inhelder was reported although numerous differences exist which lead the investigators to call for additional research on the issues. —W. D. Smith.

**419. McHUGH, GELOLO** (Duke Univer., Durham, North Carolina), & **WASSER, JUDITH K.** **Application of the Thurstone-Chave attitude rating technique to attitudes toward menstruation.** *Psychol. Rep.*, 1959, 5, 677-682. Statements of the attitudes of 200 female college students toward menstruation were obtained, and generalized into 48 statements. Graduate students of mental hygiene, professional women psychologists, and professional women mental hygienists then rated these statements as related to good or poor mental hygiene. The statements and the median ratings by students and professional women are given. Some possible uses of this scale are pointed out. —Authors' Summary.

**420. MANGAN, G. L.** (Victoria Univer., Wellington, New Zealand) **A factorial study of speed, power and related temperament variables.** *Brit. J. educ. Psychol.*, 1959, 29, 144-154. The factors of power, speed, persistence, accuracy and carefulness were investigated by factorizing 38 sets of test scores among 200 13- and 14-year-olds in a London comprehensive secondary school. Factors were extracted from a  $38 \times 38$  correlation matrix by Thurstone's centroid method. Rotation yielded five clearly identifiable and two less definite factors—content factors  $g+v$  and  $N$ , speed factors  $P$ , verbal tempo and fluency, and temperament factors, persistence and speed accuracy. Persistence and speed-accuracy were identified as work-attitude or method-of-approach factors, which are closely linked with the difficulty of test material. Probably the operation of  $g$  and the content factors  $V$ ,  $K$  and  $N$  are affected considerably by these work-habit components. The other speed factors isolated appear to be relatively unimportant. —From Author's Summary.

**421. MARSHALL, HELEN R.** (Univer. of Kentucky, Lexington), & **MAGRUDER, LUCILLE.** **Relations between parent money education practices and children's knowledge and use of money.** *Child Developm.*, 1960, 31, 253-284. This study explored aspects of the widely held assumption that specific money education practices of parents affect children's knowledge and use of money. Subjects were 512 Kentucky children and their 484 different mothers or fathers, representing the entire socioeconomic range. There were 64 boys and 64 girls at each of the ages of 7, 8, 11, and 12 years. Children were given tests and interviews individually at school, and parents were interviewed at home. The evidence supported the assumption, but did not support all recommended money education practices. Children's knowledge of money and its use related positively to number of experiences in using money, amount of spending money, experience in saving money, and the extent to which parents followed recommended practices in money management, and also related negatively to the importance of money to the parents. However, children's knowledge of money use failed to relate to receiving an allowance, to earning money, and to the use of money as a reward or punishment for behavior. —Authors' Abstract.

**422. MAXWELL, A. E.** (Univer. of London) **A factor analysis of the Wechsler Intelligence Scale for Children.** *Brit. J. educ. Psychol.*, 1959, 29, 237-241. A factor analysis of the correlation matrix for the subtests of the WISC was carried out for each of the age groups,  $7\frac{1}{2}$ ,  $10\frac{1}{2}$ , and  $13\frac{1}{2}$  years. In each analysis two factors were extracted and these, after rotation, are found to give patterns of loadings which are similar for all three age groups. The factors were then rotated; the first is labelled "vg" (verbal-intellectual), and the second "sp" (space-performance). Methods for obtaining factor scores are then given and it is argued that such scores are

preferable to the customary Verbal and Performance scores when summarizing a child's performance on this battery of tests. —From Author's Summary.

**423. MEDINNUS, GENE R.** (229 E. Cherry, Watseka, Ill.) **Immanent justice in children: a review of the literature and additional data.** *J. genet. Psychol.*, 1959., **94**, 253-262. 240 lower socioeconomic children, 30 boys and 30 girls at each of the age levels 6, 8, 10, and 12, were administered a questionnaire consisting of stories, two of which concerned immanent justice, drawn from Piaget's work. While the number of children revealing a belief in immanent justice decreased from age 6 through 12 for one story, the opposite trend was found for the other. It was concluded that a child's expressed belief in immanent justice is dependent on such factors as the meaningfulness of the story described, the presence or absence of rational alternative explanations, and the range of the child's experiences. —From Author's Summary.

**424. MIYAWAKI, ZIRO.** **The study of personality traits of rural pupils.** *Jap. J. educ. Psychol.*, 1958, **6**, 77-84. Fourth grade pupils in the compound classes in culturally and geographically isolated areas served as subjects for this study. Personality descriptions are based largely on the responses to the Picture Frustration Test with additional data being derived from the Children's Apperception Test, Educational Environment Questionnaire, Sociometric Test, and a B-type intelligence test. The author reports that the mean IQ is not low in general, but the number of superior pupils is small in contrast to the number of inferior ones. The author states that they show immaturity in sentence expression and in ability to transfer. General achievement of these pupils is also low. In general, the emotions of these children are simple, needs not differentiated, and they show the stability of such a primary group. The author describes the children as immature in sociability. "Living in the limited social life, they are dull in competition, lacking independence, deficient in energy." With reference to their behavior, the author suggests that these children tend easily to submit to authority and this may be due to "the potential resignation caused by their less awareness of complex needs and pressures." (From English Summary)—A. Grams.

**425. MOGAR, MARIANNINA.** (Des Moines Child Guidance Center, Iowa) **Children's causal reasoning about natural phenomena.** *Child Developm.*, 1960, **31**, 59-65. According to Piaget's concept of physical causality, there are universal developmental stages in a child's progression toward cognitive maturity. This investigation attempted to assess the influence of age, level of difficulty, and familiarity with the phenomena on the causal reasoning ability of children. Three groups (kindergarten, second, and fourth grades) were given experiences relevant to three causal principles involving water level, floating, and shadows. Their ability to reason causally about these phenomena was then evaluated and compared with matched controls who were not given the prior experience. Analysis of the data revealed significant age differences in levels of explanation with respect to all three principles. The difference between the level of explanation of the experimental and control groups was tested at each age level and for each principle separately. None of these differences approached significance which tends to support Piaget's theorizing. However, contrary to his contention that before the age of 7 or 8 experience or explanation will not affect an individual's level of explanation of physical events, the findings here indicate that 5- and 6-year-olds can induce laws from repeated observations of a phenomenon. —Author's Abstract.

**426. MOORE, TERENCE W.** (Child Study Centre, London) **Studying the growth of personality.** *Vita Humana*, 1959, **2**, 65-87. The increasing popularity of longitudinal studies of child development gives cause to consider the uses to which the material collected in them can be put. This is especially true of psychological information which, because of the very wide and complex field that it has to cover and the intangibility of its key concepts, stands in special need of clear, purposeful organization. In this paper the psychological data collected during the first seven years of

the longitudinal research at the Child Study Centre, London, are surveyed and their uses considered. Ten key questions are propounded, and the programmes of analysis resulting from their application to behavioural data of various types are considered, with illustrations from this and other researches of the kinds of findings that can be expected to accrue. These concern: (1) Incidence and distribution of behaviour items age by age. (2) Prediction from one age to another. (3) Relation between behaviour and constitutional factors. (4) Inter-relation of behaviour items at a given age. (5) Effects on behaviour of situation and observer. (6) Effects of crucial experiences. (7) Effects of parental management. (8) The influence of social factors. (9) Comparison of samples in different countries. (10) The study of individuals. —Author's Summary.

**427. MOSHER, DONALD L., & SCODEL, ALVIN.** (Ohio State Univer., Columbus) **Relationships between ethnocentrism in children and the ethnocentrism and authoritarian rearing practices of their mothers.** *Child Developm.*, 1960, **31**, 369-376. One hypothesis concerning the information of prejudiced attitudes in children towards ethnic minorities stresses the social climate, and particularly the home, in which these attitudes are learned. The other, more personality-centered hypothesis stresses the invidious effects of authoritarian rearing practices that culminate in displaced hostility onto ethnic minorities. This study was designed to present supplementary evidence concerning these two hypotheses and to investigate their relative importance. A social distance measure of ethnocentrism was administered to 400 sixth- and seventh-grade children in a predominantly middle-class suburb of Columbus, Ohio. Secretly coded questionnaires were filled out and returned by 161 mothers. These questionnaires included the California E scale and selected items on authoritarian rearing practices taken from the Gough, Harris, and Martin "Opinion on Child Training" scale. The results demonstrated that, although there is a significant relationship between the ethnic attitudes of mothers and the attitudes toward authoritarian rearing practices of these mothers, the ethnic attitudes of children are related only to the ethnic attitudes of their mothers and not to the attitudes toward authoritarian rearing practices of their mothers. —Authors' Abstract.

**428. MULLEN, FRANCES A., ITKIN, WILLIAM, & BRAUER, IRVING.** (Chicago Board of Educ., Ill.) **Personality and social background factors related to the achievement and adjustment of educable mentally handicapped children: a report on a preliminary study.** *Amer. J. ment. Def.*, 1959, **63**, 1046-1058. This paper reports the findings of a study preliminary to one aimed at comparing the progress of matched pairs of educable mentally handicapped children, one of each pair in a special division for educable mentally handicapped and the other in a regular grade awaiting placement. Numerous tests and rating scales were employed to evaluate the 263 Ss, as well as home background factors and socioeconomic status. Many findings and relationships, considered to be tentative, are presented. —J. W. Fleming.

**429. MUSSEN, PAUL, & DISTLER, LUTHER.** (Univer. of California, Berkeley) **Child-rearing antecedents of masculine identification in kindergarten boys.** *Child Developm.*, 1960, **31**, 89-100. The mothers of 19 boys, nine of them high and 10 of them low in masculinity as measured by the IT Scale, were interviewed about their own and their husbands' child-rearing practices and the boys' conscience development. On the basis of these interviews ratings were made on 28 variables of father-son relationships, family climate, and conscience. The major findings were as follows: (1) The variables of father-son relationships are more directly associated with sex-typing than are those pertaining to mother-son relations. (2) According to mothers' reports the fathers of the highly masculine group had stronger affectional bonds, and acted more affectionately, toward their sons than did the fathers of boys low in masculinity. These findings appear to support the developmental hypothesis of identification. (3) There were trends in the data that suggest that the fathers of the highly masculine group play a greater role in their sons' upbringing, doing more of their sons' caretaking and having greater responsibility for child-rearing policies. These trends, together with the findings about the warmth and affection of the fathers of highly masculine

boys, may be interpreted as supportive of the role theory of identification. (4) The highly masculine boys appear to experience more permissive, easygoing familial climates and less punitive, more love-oriented techniques of discipline than their less masculine peers. (5) Boys high in masculinity tend to be high in conscience development, too. The correlates of these two products of parental identification are quite different, however. —Authors' Summary.

**430. O'CONNOR, N.** (Maudsley Hosp., London, England) **Problem solving and mental defect.** *Cerebral Palsy Bull.*, 1959, No. 6, 9-13. The traditional view is that the low-grade mental defective is relatively ineducable. It is suggested that part of this ineducability may be traced to conditions of deprivation which are not conducive to the learning of fundamental processes upon which other learning may take place. Experimental work with defectives has shown that while initial performance on tasks is related to intelligence-test performance, the final performance after training is not. The conclusion drawn from other experiments is that defectives are lacking in the controlling function of language, but even here there are grounds for supposing that a measure of verbal efficiency can be achieved. —Author's Summary.

**431. OKAJI, ICHIRO.** **Studies on characteristics of adolescents' attitudes toward life.** *Jap. J. educ. Psychol.*, 1958, 6, 7-13. The author explains that his purpose is twofold—first, to measure and study adolescent attitudes by means of an attitude scale, and second, to study the degree of stability of adolescent attitudes by noting the amount of change as the result of group discussion. The author compared the responses of 157 high school students with those of 58 adults on his attitude scale. He found they were both favorable to "uneventful, easy and 'petit bourgeois' way of living; that they both manifested constructive, spiritual, and social centered" attitudes. But the scores of the adults in this case were higher than those of the students. There was no essential difference between the groups in their response to items reported to measure "sensational, pragmatic, and individualistic" attitudes. The scores, though positive, were not as high in this area as in the preceding one. To items measuring "nihilistic, negative, and fatalistic" way of living, both the students and the adults demonstrated strong, negative reactions, and the author concludes that the groups are not characterized by such attitudes. The second part of the study consisted of measuring the attitudes of 47 experimental subjects and 67 controls selected from the student group before and after the experimental group participated in discussions on the theme "How we should live in this modern society." The author suggests that the group discussion processes made significant changes in the adolescent's attitude toward life, and suggested that this is evidence of the instability of adolescent attitudes. (From English Summary)—A. Grams.

**432. PATTERSON, G. R.** (Univer. of Oregon, Eugene), **HELPER, M. E., & WILCOTT, R. C.** **Anxiety and verbal conditioning in children.** *Child Developm.*, 1960, 31, 101-108. In keeping with the hypothesis put forward by the Iowa group, it was hypothesized that the effects of high levels of anxiety would be that of impairing the acquisition of a complex response. Two samples of disturbed children were used in the study. These samples, matched for age and sex, were obtained from psychiatric treatment programs. Conditioning occurred if, as a result of social reinforcement, there was a change in the number of verb responses given to an adaptation of the Kent-Rosanoff word association list. Clinical ratings of manifest anxiety and the estimates of skin conductance were made during the conditioning trials. Significant conditioning was obtained from both samples. The relationship (linear) between clinical ratings and conditioning was  $-.53$  and  $-.46$  for samples one and two respectively. The data lend general support to the hypothesis that high levels of anxiety impair the acquisition of complex responses. The relationship between skin conductance and conditioning was curvilinear; epsilons for the two samples were  $-.48$  and  $-.34$ . That is, children who were either high or low on skin conductance show impairment in conditioning. —Authors' Abstract.

433. PEEL, E. A. (Univer. of Birmingham, England) **Experimental examination of some of Piaget's schemata concerning children's perception and thinking, and a discussion of their educational significance.** Brit. J. educ. Psychol., 1959, 29, 89-103. Four researches testing Piaget's schemata for the mental development of children concerning haptic perception, spatial relationships in drawing, children's logical judgments, and children's moral judgments are reported. The four experiments involved from 32 to 60 children each; the children ranged in ages from 2-9 to 14-11. Reliability of judges was measured by correlating independent sets of judgments. The validity of Piaget's schemata was assessed by comparing the development of the children's thinking and perception with the criteria of chronological age, mental age, and the total score for each child's overall level of perception and thinking by an adaptation of Guttman's technique. In general, Piaget's conclusions were substantiated. The educational implications of Piaget's work are considered. —From Author's Summary.

434. PHILLIPS, BEEMAN N., HINDSMAN, EDWIN, & JENNINGS, EARL. (Univer. of Texas, Austin) **Influence of intelligence on anxiety and perception of self and others.** Child Developm., 1960, 31, 41-46. The effects of intelligence on relations between anxiety and attitudes toward self and others were studied. The 709 seventh grade Ss were selected from the population of the Human Talent Project which is being conducted in four Texas communities. Use was made of the California Test of Mental Maturity, scales developed in the Texas Cooperative Youth Studies (CYS), the Castaneda-McCandless Anxiety Scale, and the Brown-Holtzman Survey of Study Habits and Attitudes (SSHA). The results of this study substantiate the generally accepted hypothesis that anxiety produces dissatisfaction with self and others, for it was found that anxious Ss expressed more self- and other-dissatisfaction than less anxious Ss. However, as predicted by the rationale of the study, these relations were modified to some extent when the intelligence of the Ss was considered. Within the limits of this study, then, it can be concluded that relationships between anxiety and attitudes toward self and others have only limited generality, the nature of such relationships depending to some extent on the characteristics of the sample studied. —Authors' Abstract.

435. REID, JACKSON B., KING, F. J., & WICKWIRE, PAT. (Univer. of Texas) **Cognitive and other personality characteristics of creative children.** Psychol. Rep., 1959, 5, 729-737. Differences in certain cognitive and other personality characteristics between 24 "creative" and 24 "non-creative" seventh-grade children were investigated. Performances on cognitive measures, such as intelligence and achievement tests, were in substantial agreement with those reported for adults. Creative children also proved to be less anxious. However, findings on some personality-attitudinal measures were quite different from those reported for adults. For example, creative children tend to be more cyclothymic than schizothymic, and there is no evidence to indicate that they are more desurgent than non-creative children. The desirability of a comparable criterion for creativity among both children and adults is strongly indicated. —Authors' Summary.

436. REUTTOWA, NATALIA. **Ocena identycznych odcinków czasu przez dzieci w wieku szkolnym.** (Evaluation of identical periods of time by children of school age.) Psychol. Wychowawcza, 1959, 2, 241-268. The author tries to find an answer to the following questions: Do identical periods of time during which the children are occupied with various kinds of activity, seem of different duration to them? If that is so, does there exist any connection between the definition of the duration of the various activities on the one hand and the extent of interest they aroused in the children on the other hand, and also does there exist a connection between the type of activity and the evaluation of its duration? 50 girls and 50 boys between 11 and 15 years of age participated in the survey. The children performed the same three different functions, each lasting for seven minutes and following each other in the same order: they copied something, listened to somebody reading to them



and looked at pictures. Then they had to give their own evaluation of the time needed for each activity and had to define which of them seemed to them to be most interesting and which most boring. As a result of these investigations the following conclusions were drawn: the periods of time of identical duration which followed each other and during which the children were occupied with various activities, seemed to the children under investigation to have been of different duration. It was, however, not possible to decide what factors exerted a definite influence on the evaluation of time. It seems however that the higher degree of physical activity during copying was responsible for the inclination to consider this activity as lasting a shorter period of time than other experimental tasks and the fact that there was less activity while the children listened to somebody reading to them—made them believe that this period of time was longer than the others. Keener interest aroused in some activity also made them think that it lasted longer than other periods. The fact that some activities are felt to be less interesting exerted only a weak influence making the children consider that this had been the longest period. The results of this research made possible to suppose that a greater quantity of psychological content supplied may lead to an intensified concentration and thus may be responsible for making children overrate the length of one of the identical periods of time in contradistinction to the remaining two periods. It is also possible that the fact that only the ear was occupied in the case of listening to somebody reading was responsible for the overrating of the time needed for this occupation. —English Summary.

**437. RICHARDSON, CLAUDIA, & CHURCH, JOSEPH.** (Vassar Coll., Poughkeepsie, N.Y.) **A developmental analysis of proverb interpretations.** *J. genet. Psychol.*, 1959, **94**, 169-179. Interpretations of seven common proverbs were obtained from 64 children, ages 7 to 12, and from 30 adults. Analysis of responses revealed developmental changes in orientation to the task as one of definition rather than of evaluation, explanation, conundrum-solving, free association, etc.; in interpretation of proverbs as general statements instead of concrete representations; and in comprehension of the metaphorical nature of the proverbs and ability to coordinate the two levels of meaning. Findings were discussed relative to Werner's general developmental theory. —From Authors' Summary.

**438. RYCHLAK, JOSEPH F.** (Washington State Univ., Pullman) **Self-confidence, ability, and the interest-value of tasks.** *J. genet. Psychol.*, 1959, **94**, 153-159. 60 elementary school boys were administered four subtests of the WISC. Before and after testing they ranked the subtests on the basis of their relative interest value. After each subtest was administered S rated his performance, judgments which were used to establish high and low confidence Ss. A further self-estimated ability ranking of all four subtests was also obtained at completion of testing. The influence of interest value on self-estimated ability was greater in low than high confidence groups, and neither group estimated actual ability with any proficiency. —J. W. Fleming.

**439. SAMPSON, O. C.** (City School Psychological Service, Leicester) **The speech and language development of 5-year-old children.** *Brit. J. educ. Psychol.*, 1959, **29**, 217-222. The aim of this research was to continue the study of speech development reported in 1956 of children 18 to 30 months of age. The same 50 children (25 boys and 25 girls), representative of all elements in the community, were followed up at the age of 5 years. They were given Intelligence, Vocabulary and Language tests. Most were seen in school. Every child had made progress and this progress appears to be related to his family's occupational status and his own general intelligence. When the earlier and present ratings were compared, the correlation was positive but somewhat low. There was some evidence in the performance of the 5-year-old children tending to indicate the boys' superiority in precision and the girls' in fluency of expression, but on the whole the sex differences were small. —From Author's Summary.

**440. SCHULMAN, JEROME L., & STERN, SHIELA.** (Johns Hopkins Hosp., Baltimore, Md.) **Parents' estimate of the intelligence of retarded children.** *Amer.*



J. ment. Def., 1959, 63, 696-698. 50 parental estimates, most of them from mothers, were obtained in interview of their child's mental age. The children, ranging in age from 3-3 to 12-10, had been referred from a general pediatric clinic primarily for psychometric evaluation. Psychometric estimates of functioning were obtained with the Binet and Gesell tests. Parental estimates were converted to IQ scores by the conventional formula. About as many parents overestimated IQ scores as underestimated. The correlation between test IQ and "parent IQ" was .67, the mean IQ estimates, respectively, being 55.5 and 57.2. The results suggest that many parents have some awareness of the presence and degree of retardation, but that this awareness "... is sensed rather than clearly understood. ..." —J. W. Fleming.

441. SHIOKAWA, TAKEO. **Youth's attitudes toward the testing of atomic and hydrogen bombs.** Jap. J. educ. Psychol., 1958, 6, 65-76. This study compares the interest of and influences upon Japanese Youth of the Bikini Fishing Boat incident which caused the death of a Japanese captain from Yaizu City. A questionnaire was administered to students by home room teachers in grades 2 to 9. They found that children living in Yaizu feel the matter closer to themselves than children living in other parts, and, that the higher their academic grade, the more they seem concerned and troubled by it. Most of the subjects, living near Yaizu City or not, believed that atomic and hydrogen bomb testing should be forbidden. The author concludes with the suggestion that the same type of questionnaire might be given to students in countries who set off the explosions to determine what their attitudes toward such testing is. (From English Summary)—A. Grams.

442. SIEVERS, DOROTHY J. (Columbus State Sch., Ohio) **A study to compare the performance of brain-injured and non-brain-injured mentally retarded children on the Differential Language Facility Test.** Amer. J. ment. Def., 1959, 63, 839-847. Differences in language skills were compared among 30 retarded brain-injured, 33 retarded non-brain-injured, and 100 normal children. For all subjects Stanford-Binet MA scores ranged from 2-0 to 5-11. Comparisons were made on the Differential Language Facility Test, which was developed from Osgood's theory of communication, consisting of 11 subtests in such areas as labeling, speech mimicry, gestural conversation, etc. In general, it was found that normals tended to be superior to brain-injured children in over-all language ability, this difference increasing with MA, and were higher than both other groups on subtests requiring expression without semantic meaning. The retarded non-brain-injured were higher than brain-injured on subtests involving making semantic connections between visual objects. —J. W. Fleming.

443. SIMPSON, WILLIAM H., & BRIDGES, CECIL C., Jr. (Oklahoma City Public Schools, Oklahoma) **A short form of the Wechsler Intelligence Scale for Children.** J. clin. Psychol., 1959, 15, 424. The sums of the weighted scores of the WISC vocabulary and block design subtests were correlated with the full weighted score of the scale for 120 children referred to the Division of Child Guidance of the Oklahoma City Public Schools. A correlation of .874 was obtained and it was felt that this was sufficient to use the vocabulary-block design subtests as a screening instrument. A table is presented for converting the sum of the two subtests to an estimated full-scale IQ. —A. M. Kaplan.

444. SMITH, A. C., & REED, G. F. (Kingston Coll., Kingston Upon Hull, England) **An experimental investigation of the relative speeds of left and right-handed writers.** J. genet. Psychol., 1959, 94, 67-76. This study had three objectives: to determine differences in handwriting speed of right- and left-handed writers, to determine if any found differences apply to tasks which are less skilled or less familiar, and to estimate the effect on such differences of a reversal in direction of hand movement. The subjects were 140 children aged 8 to 14. There were equal numbers of each sex and of right- and left-handed writers. Each subject was administered three pencil and paper writing or tracing tasks. No statistically significant differences were found. —J. W. Fleming.

**445. SOKHIN, F. A.** On the formation of linguistic generalizations in course of speech development. *Vop. Psikhol.*, 1959, No. 5, 112-123. Experiments with 2 to 3 year old children have revealed that a child goes through several stages in the process of forming grammatical generalizations. At the first stage the grammatical element (in the case dealt with—a preposition indicating a space relation) is not perceived by the child as a significant element of the phrase, which contained an instruction for the child to act according to it. At this stage the understanding of the phrase depends essentially on the situation. At the second stage the grammatical element presents itself to the child as an independent significant link of the phrase structure, designating a definite space relation. However, nonlinguistic factors continue to play an important role in the process of understanding. It is only at the third stage that the understanding depends entirely on the phrase structure, on the meaning of the preposition. The formation of a linguistic generalization proceeds essentially by abstraction, i.e., by detachment from the given situation. The data obtained show that this law holds as good for active speech as for the understanding of spoken sentences. —English Summary.

**446. SPIKER, CHARLES C.** (Univ. of Iowa, Iowa City) **Associative transfer in verbal paired-associate learning.** *Child Developm.*, 1960, 31, 73-87. Three experiments were reported on associative transfer in verbal paired-associate learning. All three experiments used the A-B, A-C sequence with an A-B, D-C intra-S control. List 1 consisted of four pairs of words, while List 2 consisted of eight pairs. Four of the stimulus words of List 2 were the same as the stimulus words of List 1 (the A-C condition) and four were different (the D-C condition). All List 2 response words were different from those of List 1. The Ss were fifth- and sixth-grade children. Experiment I demonstrated that Ss receiving 15 trials on List 1 performed significantly better on the D-C condition of List 2 than did those receiving only 6 trials. More associative interference was found for the Ss given 15 trials on List 1 than for those given only 6 trials. Experiment II demonstrated that Ss instructed to rehearse during List 1 learning performed better on the D-C condition than did Ss not so instructed. Moreover, the instructed Ss showed more associative interference than the uninstructed Ss. Experiment III showed that Ss instructed in the use of mnemonic devices during List 1 learning performed better on List 2 than did uninstructed Ss. Significant interference was found for both groups, that for the instructed Ss appearing significantly earlier than that for the uninstructed Ss. —Author's Abstract.

**447. SPIVACK, GEORGE, LEVINE, MURRAY, FUSCHILLO, JEAN, & TAVERNIER, ANN.** (Devereux Foundation, Devon, Penn.) **Rorschach movement responses and inhibition processes in adolescents.** *J. proj. Tech.*, 1959, 23, 462-466. The purpose of this study was to examine the relationship between Rorschach movement responses, voluntary inhibition of motor and cognitive responses, and ratings of impulsiveness, compliance, and general activity level in a group of adolescents. Rorschach M responses did not increase following motor inhibition, although FM and m responses did. Spontaneously given movement responses were unrelated to measures of inhibition. Ability to cognitively inhibit was inversely related to ratings of impulsiveness, and spontaneous FM tendency was related to ratings of general activity level. It is concluded that the Rorschach M response has a different significance in adolescents than in adults. The hypothesis was formed that the structural relationship between the inhibition of motor activity and empathic motion perception or fantasy does not take form until maturity is reached, and that general inhibition ability does not become a pervasive trait in personality until adulthood. —Authors' Summary.

**448. STEIGMAN, MARTIN J., & STEYENSON, HAROLD W.** (Univ. of Minnesota, Minneapolis) **The effect of pretraining schedules on children's learning.** *Child Developm.*, 1960, 31, 53-58. Two groups of 18 Ss each were given pretraining with three games which differed from each other and from a subsequent learning task. Group 2 was reinforced arbitrarily on 2 of the 12 responses made on each game, and Group 10 was reinforced on 10 of the responses. Following pretraining Ss were pre-

sented with a size discrimination in which the response to one of three stimuli was consistently reinforced. In Group 2 fewer Ss learned the discrimination, and average number of correct responses was significantly lower than in Group 10. The results, therefore, indicate that pretraining gave rise to general response tendencies which differentiated the learning role in the two groups. —Authors' Abstract.

**449. STOCKSTILL, KIAH, Jr.** (Thomaston Public Sch., Georgia), **FRYE, ROLAND L., & STRITCH, THOMAS M.** **Comparison of Differential Aptitude Test scores for junior high school students.** Psychol. Rep., 1959, 5, 765-768. Differential Aptitude Test scores for 40 non-motivated and 30 motivated students enrolled in the ninth grade were found to be significantly different. Girls scored higher than boys, with motivated girls performing best. Interpretation and additional controls are suggested. —Authors' Summary.

**450. STODDARD, HILDA M.** (Hofstra Coll., Hempstead, N.Y.) **The relation of parental attitudes and achievements of severely mentally retarded children.** Amer. J. ment. Def., 1959, 63, 575-598. This study is concerned with the relationship of certain parental attitudes to the school achievement of trainable retarded children. The subjects were 32 children, age 7 to 17 and IQ 22 to 48, who were attending special classes. Attitudes were assessed by rating responses to crucial questions included in a casework interview, lasting approximately two hours, in the parents' home. In most instances the respondent was the mother. Data on the status and progress of the retardates was obtained by teacher ratings of adequacy in self help, social, motor, academic, and vocational skills. Measures from the Stanford-Binet and Vineland Social Maturity Scale were also employed. The results were analyzed by means of correlation coefficients, and were not significant in any instance. Neither parental awareness and acceptance of the retardation, nor the reality with which the parent viewed the present and future needs of the child, were related to his over-all growth, to his progress during a year of special education, or to his MA, CA, or IQ. Limitations and strengths in the methods employed are discussed. —J. W. Fleming.

**451. STOTT, D. H.** (Univer. of Glasgow) **Evidence for pre-natal impairment of temperament in mentally retarded children.** Vita Humana, 1959, 2, 125-148. In a comprehensive study of the life-histories of 188 mentally defective and scholastically very backward children matched with normal controls, close associations had been observed between disturbed pregnancy and a series of physical and mental handicaps (infantile ill-health, congenital malformation, mental subnormality) of an order which suggested a syndrome of pregnancy/general-impairment. The predominant personality-type of the backward children, as assessed by the Bristol Social Adjustment Guides, was "unforthcomingness." This was found to be related to pregnancy-stress, but not so closely as the physical components of the syndrome. The point at issue was whether this form of temperamental impairment was a member of the above syndrome or whether its association with stressful pregnancy could be accounted for in other ways. Various alternative explanations were examined. Despite the high incidence of early ill-health among the retarded children, this was found to be surprisingly unrelated to unforthcomingness. The unforthcoming children had also been subjected to less maternal deprivation by way of separation than both the temperamentally stable and the disturbed children. There was almost exactly the same proportion of unforthcomingness among children from culturally adequate as among those from culturally inadequate homes. In relation to maternal personality, stable mothers were found to have somewhat less than a proportionate share of unforthcoming children, but this tendency was not significant. There was no relationship with unfavourable family-situation, although the latter was strongly associated with other types of behavioural disturbance. Since in consequence, no other feasible explanation was apparent, it was inferred that the relationship might be etiological. When the reasons for the lack of association between unforthcomingness and other postulated sequelae of disturbed pregnancy—early ill-health and malformation—were

examined, it transpired that those retarded children who had suffered behaviour-disturbance without physical impairment tended to have histories of stress in the later stages and especially the last trimester of gestation. —Authors' Summary.

452. STOTT, D. H. (Univer. of Glasgow, Scotland) **Infantile illness and subsequent mental and emotional development.** *J. genet. Psychol.*, 1959, **94**, 233-251. All the legitimate, Bristol-born children who had spent at least two weeks in a hospital between 0 and 2 years of age were traced. 72% (198) were found and matched against controls whose previous history was unknown. At follow up the Ss were age 7 to 11. Hospitalized children were found to be more retarded, a finding not accounted for by cultural level, and a significant proportion of these to be "unforthcoming" (having impaired motivation). 73% of children who had two or more types of illness were backward, whereas only 47% of single illness children were. "... evidence pointed to a common congenital origin for the early illness, the mental retardation and the impairment of personality. . . ." —J. W. Fleming.

453. SUTTON-SMITH, B., & ROSENBERG, B. G. (Bowling Green State Univer., Ohio) **Manifest anxiety and game preferences in children.** *Child Develpm.*, 1960, **31**, 307-311. The present study compares the play preferences of highly anxious boys and girls with those of boys and girls low in anxiety as measured by the CMAS. The play preferences were obtained from an 181-item scale similar in nature to that of Terman's Play Inventory. It was hypothesized that highly anxious children of each sex would show a greater preference for the games of the opposite sex than that found in the total population. Game items which had demonstrated significant sex differences in earlier studies were used as indicators of cross-sex choice. The results tended to support the hypothesis, though there was a much stronger tendency for highly anxious boys to choose feminine games than there was for highly anxious girls to choose masculine games. There appeared, in addition, to be a maturity difference between the highly anxious boys and girls, with the former choosing immature girls' games and the latter, mature boys' games. It was concluded that the anxiety measured by the CMAS is related to variables in the area of sex role identification. —Authors' Abstract.

454. TARDIEU, GUY (Paris, France), RONDOT, P., DALLOZ, J. C., MENSCH, J., & MONFRAIX, C. **The stretch reflex in man.** *Cerebral Palsy Bull.*, 1959, No. 7, 14-17. The classification and assessment of the various stiffnesses met in C. P. children are not accurate enough. This is why the myotatic reflex has been studied during passive mobilisation. The E.M.G. study shows that in normal it is always possible to obtain under this condition a flat record if the velocity of the stretching does not exceed 30° in 100 ms. In spasticity it is always possible to obtain such an absence of potentials at rest, and too if the passive movement is slow enough. There is a definite limit speed which defines the degree of spasticity. In rigidity this limit speed is very low. In athetoid tensions it is impossible to define any limit speed. Potentials vary from one moment to another. Dynamometric study with strain gauge brings out the specific pictures of rigidity and spasticity. The force is a definite function of the speed in both spasticity and rigidity. In athetoid tensions, on the other hand, capriciousness is characteristic, giving an extreme scatter when force is plotted against speed. High speed camera records also give interesting data in the measurement of the myotatic reflex in man and hence help to differentiate different types of stiffness and measure them. —Authors' Summary.

455. TRENT, RICHARD D. (Bayamon, Puerto Rico) **Anxiety and accuracy of perception of sociometric status among institutionalized delinquent boys.** *J. genet. Psychol.*, 1959, **94**, 85-91. 63 adolescent boys in a residential training school under different instructions each rated himself and the others on a five-point scale and was administered the Children's Manifest Anxiety Scale. Discrepancy scores were used to establish accuracy of perception. Anxiety was negatively related to accuracy of perception of own status. The less anxious enjoyed significantly higher social status than the more anxious, and the more accurate the perception of own status the

greater the social status. Ss who overestimated their own status tended to overestimate the status of others. —From Author's Summary

**456. WHEELER, D. K.** (Univer. of Western Australia) **Symposium: The development of moral values in children—punishment, discipline, and educational objectives.** Brit. J. educ. Psychol., 1959, 29, 118-127. The nature and extent of punishments administered in a representative sample of all Western Australian secondary schools are reported and supplemented by information about the punishment of these same adolescents in their own homes. The reactions to punishment of 765 students are analyzed and discussed. Most students conceive of punishment as retaliatory and/or retributive. This is taken to be a reflection of the community attitude towards punishment, which is contrasted with modern preventive and remedial theories of discipline. The effects of sanctions commonly used in schools are considered with respect to educational aims in a democratic society, and the conclusion drawn that such negative sanctions do not effectively promote, and may even retard, the educational process. —Author's Summary.

**457. WHITE, SHELDON H.** (Univer. of Chicago, Ill.), & **SPIKER, CHARLES C.** **The effect of a variable conditioned stimulus upon the generalization of an instrumental response.** Child Developm., 1960, 31, 313-319. Generalization following training to several stimuli was compared with that following training on a constant CS. Using a free-responding apparatus, where pulls to a handle delivered marbles during the  $3\frac{1}{2}$  sec. that the CS was on, 16 preschool children received eight presentations of each of three colored lights. A control group of 16 children had 24 training trials with a constant stimulus. Two cycles of counterbalanced tests for generalization on a series of stimuli differing in hue and intensity were given to both groups. There were no significant differences over the last half of training. The variably trained group generalized significantly more than did the control group. —Authors' Abstract.

**458. WHITECRAFT, ROBERT A., COBB, HENRY V., & DAVIS, ROGER T.** (Univer. of South Dakota, Vermillion) **Supplementary report: solution of bent-wire detour problems by preschool children.** Psychol. Rep., 1959, 5, 609-611. 18 preschool children, selected from three age groups, were given bent-wire detour problems. The performance of the 2-year-old children was comparable to that previously reported for adolescent apes and the performance of 3- and 5-year-old children was as high as or higher than that of adult apes. —Authors' Summary.

**459. WINITZ, HARRIS.** (Univer. of Kansas, Lawrence) **Language skills of male and female kindergarten children.** J. Speech Hearing Res., 1959, 2, 377-386. 75 boys and 75 girls who were expected to enter kindergarten classes of Iowa City schools in the fall, were selected from Iowa City, Iowa homes, and matched for CA, intelligence, socioeconomic status, and family constellation. Differences were mathematically significant in favor of the girls, in the case of only two measures, the mean of the five longest responses and the mean standard deviation. In measures of word fluency, only the difference for child names is significant. Other sex tendencies were observed but had little or no significance mathematically. —M. F. Palmer.

**460. WINITZ, HARRIS.** (Univer. of Kansas, Lawrence) **Relationships between language and nonlanguage measures of kindergarten children.** J. Speech Hearing Res., 1959, 2, 387-391. 150 randomly-sampled normal 5-year old children, 75 boys and 75 girls, were studied for interrelationships among several language and non-language variables. Very high correlations were found between the WISC Performance Scale and Verbal Scale, IQs, and Full Scale IQ. Moderately high correlations were found between the WISC Performance Scale IQ and the WISC Verbal Scale IQ, between the Ammons Test scores and the WISC Full Scale IQ, and among various verbalization measures. Low correlations were found between socioeconomic status and other variables, between language measures, and the full-scale IQ, between verbalization measures and the Ammons Test scores, between the Templin Screening Test of Articulation and other variables, etc.—M. F. Palmer.

## PSYCHIATRY AND MENTAL HYGIENE

461. CHAZAN, M. (Liverpool Educ. Committee Child Guidance Centre) **Maladjusted children in grammar schools.** Brit. J. educ. Psychol., 1959, 29, 198-206. This paper discusses the problems presented by 60 grammar school children referred to a child guidance centre between 1949 and 1956. Some of the children had difficulty in maintaining the standards of behaviour and work required of them; some showed nervous or neurotic symptoms. The analysis of their case-histories suggests that in most cases their maladjustment was related to a combination of factors, but neither physical condition nor lack of ability was a frequent cause. There were severe personality defects or disturbances in only a quarter of the cases. In nearly every case there were adverse environmental factors. Faulty parental attitudes were particularly damaging, though often modifiable. The methods of approach to treating the problems, and the outcome of treatment are outlined. —From Author's Summary.

462. COLBERT, EDWARD G. (Univer. of California Med. Center, Los Angeles), KOEGLER, RONALD R., & MARKHAM, CHARLES H. **Vestibular dysfunction in childhood schizophrenia.** Amer. Arch. gen. Psychiat., 1959, 1, 600-617. Tests of vestibular and optokinetic function were performed on 43 childhood schizophrenics, 18 behavior problem children, and 32 normal children. The normal and behavior problem children had reactions similar to those of normal adults. The majority of childhood schizophrenics had markedly depressed or absent vestibular responses to caloric and rotational tests. The degree of hypoactivity was more marked in the younger childhood schizophrenics. The responses of some schizophrenic children varied from one observation period to the next, unlike the responses of our controls and of normal adults. There were fewer and less severe manifestations of vertigo than were seen in our controls. This study suggests the possible existence of a neurophysiological continuum between a type of childhood schizophrenia and a type of adult schizophrenia. —Authors' Summary.

463. COLE, WYMAN C. C., Sr. (3001 W. Grand Blvd., Detroit, Mich.) **Pediatrics in the space age.** J. Amer. med. Ass., 1959, 171, 641-643. The future practice of pediatrics is discussed by the Chairman of the A.M.A. Section on Pediatrics. The pediatrician will have an expanding role as the "child's physician, not merely as one who treats the diseases of childhood. . . . Many of the emotional and psychiatric problems of adult life stem from disturbed childhood. Here lies a challenge to pediatrics which is now poorly met." —I. Altman.

464. GREENE, WILLIAM A., Jr. (Univer. of Rochester Sch. Med., New York) **Role of a vicarious object in the adaptation to object loss.** Psychosom. Med., 1959, 21, 438-447. This report has been a further consideration of the vicarious object mechanism of adjustment focusing on the person used as a vicarious object and his adaptations when a change in the relation ensues. Most of the children with leukemia had been vicarious objects for their mothers, largely because of emotional deprivations for the mother preceding and during the pregnancy with the child. During later circumstances involving personal losses and further disappointments, the mother gave up the child as a vicarious object and usually became psychologically depressed. In this combination of circumstances the child's manifest leukemia developed. From these findings in children, along with the findings in adult patients, I suggest that an involvement in a vicarious object relation is one common precursor in persons in the population who become ill with leukemia and other "psychosomatic" disease. Disruption of the vicarious object relation for such persons determines when the somatic manifestations will develop. The particular somatic manifestations are determined mainly by biological rather than psychological characteristics of the individual. —Author's Summary.



465. HOROWITZ, FRANCES D. (Southern Oregon Coll., Ashland), & LOVELL, LLOYD L. **Attitudes of mothers of female schizophrenics.** *Child Developm.*, 1960, 31, 299-305. Form IV of the Parent Attitude Research Instrument (PARI) was administered to 30 mothers of normal females and 30 mothers of schizophrenic females. Ss were matched for age, education, and religious affiliation. Mothers of schizophrenics showed higher mean scores than mothers of normal females on 2 of the 19 pathogenic scales. When the data were analyzed in terms of factors, by collapsing scales, the mothers of normals had a significantly lower mean score than the mothers of schizophrenics on factor I (Approval of Maternal Control of the Child), and there was an interaction of age and group. On factor II (Approval of the Expression of Hostility) there was a similar interaction. It was concluded that, while the results were not in contradiction with other investigations, a larger sample and a form of the PARI employing more than 5 items per scale might subsequently allow analyses in terms of individual scales rather than collapsed factors. Such analyses would not only yield more information concerning the problem under investigation but would also allow for more direct comparison with other studies in the area. —Authors' Abstract.

466. KOEGLER, RONALD R. (Univer. California Med. Center, Los Angeles), & COLBERT, EDWARD G. **Childhood schizophrenia: Role of the family physician.** *J. Amer. med. Ass.*, 1959, 171, 1045-1050. 34 children at a state hospital children's unit, classed as "childhood schizophrenic," were studied intensively. A detailed questionnaire was filled out by the parents of these children as well as by a control group. Differences of significance were found in the sleep pattern, to which was related a tendency on the part of the study children to be preoccupied with spinning objects, a lack of interest in people, and a tendency to withdraw from the external world. Persistent toe-walking and spontaneous whirling were frequently noted. The differences found were in keeping with the general impression that some children show symptoms of sudden regression at very early ages. "One of the problems in the treatment of childhood schizophrenia is the usual delay in diagnosis, which often renders treatment impractical because of the many years the condition has gone unrecognized." —I. Altman.

467. LELAND, HENRY, WALKER, JOHN, & TABOADA, ADONIRAM N. (Southbury Training Sch., Connecticut) **Group play therapy with a group of post-nursery male retardates.** *Amer. J. ment. Def.*, 1959, 63, 848-851. This study focused on the effectiveness of group play therapy with mentally retarded postnursery children after other therapeutic techniques had failed. The subjects, half of whom were withdrawn and half of whom were aggressive, were eight boys, CA 4-9 to 9-6. Every subject had to be able to feed himself, dress or undress, care for his toileting, and care for himself on a developmental three and a half to five year old level. Two of the boys had congenital cranial anomalies, two were diagnosed as undifferentiated brain damage, one as familial, and three as psychogenic. Pre- and posttest measures were obtained from the Vineland Social Maturity Scale and the WISC, the IQ scores ranging from moderate to mild retardation levels. Qualitative estimates of behavior change were made by numerous institutional personnel. The 90 hours of therapy, extending over a month's time, were generally nondirective in character. Improvement in test measures were obtained only for the three scale scores of the WISC, evaluated by a one-tailed sign test. It was concluded that "... the group play therapy did not create any major changes in the level of social maturation. ... But ... the experience did activate some of the intellectual potential which could not be tapped before the experiment." The observations of the staff showed six subjects to be changed for the better, changes which were still apparent on a follow-up seven months later. —J. W. Fleming.

468. LEVITT, EUGENE E. (Indiana Univer. Med. Center, Indianapolis) **A comparison of parental and self-evaluations of psychopathology in children.** *J. clin. Psychol.*, 1959, 15, 402-404. In order to test the consistency with which a child and his mother perceive the child's psychopathology, 73 consecutive children (ages

8 to 13) seen at a child guidance clinic were administered the Children's Manifest Anxiety Scale. The scale was read to the child by the psychologist while the same scale was administered to the child's mother by the social worker. The pronouns of the scale were changed in the mother's form so that "I" and "My" became "He" and "His," etc. No significant differences were found for the Anxiety and Lie scores between the children and their mothers. Thus, both mother and child seem to agree with the degree of psychopathology demonstrated by the child. There was however a lack of item by item agreement. Two explanations are offered to account for the discrepancy. In one, those children whose symptoms are manifest and thus acted out are considered more likely to meet with consistent descriptions between mother and child than those whose symptoms are wholly or partly private. A second explanation attributes the variability to excessive guessing by the parent. —A. M. Kaplan.

**469. MARCUS, IRWIN M., WILSON, WILMA, KRAFT, IRVIN, SWANDER, DELMAR, SOUTHERLAND, FRED, & SCHULHOFER, EDITH. An interdisciplinary approach to accident patterns in children.** Monogr. Soc. Res. Child Developm., 1960, 25, No. 2. \$2.50. Following a pilot study, the major investigation reported in this monograph was directed toward a group of 23 children aged 6 to 10 who had suffered at least three major accidents. Two control groups were studied for comparison, an enuretic group and a symptom-free healthy group. Most of the mothers and fathers in the three groups also participated in the study of their intrafamily functioning. Thus, a total of 68 children, 63 mothers, and 47 fathers were intensively studied. The accident problem is reviewed along with a survey of certain significant contributions. The methodology is described in detail and the psychiatric, psychological, and social work materials are available in the appendices. A psychodynamic theory is proposed, encompassing the constitutional, psychological, and intrafamily factors. Medical examinations did not differentiate the groups of children. The accident children were found to be a more active group with good coordination. They were found to be "action-prone or action-minded" in expressing their tension. The survey did not support the theories of accidents as primarily due to "unconscious suicide" or a revolt against authoritative parents. The parents of the enuretic group were found to be more controlling and authoritative, whereas the accident group parents were more anxious, insecure, and nonassertive. The major causes did not appear linked to "acting out" the parents' self-destructive fantasies. The conditions under which an accident pattern may occur would include a hyperactivity tendency which may be constitutional, a tendency to rely on activity as a means of expressing tension, and disturbed family relationships. The incidence of personality problems showed the accident children to be more like the enuretic group in this respect than the symptom-free control group. This confirms the findings of others that there is a personality problem in the accident repeating children and explores the mechanisms through which the symptomatology is produced. The implications of this study may have value in other areas of study such as in juvenile delinquency and in certain types of learning problems. —Authors' Abstract.

**470. MAYMAN, M., & RILEY, W. G. (Menninger Found., Topeka, Kansas) The characteristic psychological disturbance in some cases of brain damage with mild deficit.** Bull. Menninger Clinic, 1960, 24, 26-36. By discussing 12 cases a working hypothesis concerning the nature of the primary psychological deficit in cases of brain damage is presented. In mildly impaired patients the span of consciousness seems to contract at times and concurrently the data of consciousness seem unstable and unpredictably elusive. The "concreteness" observed in more severe cases of brain damage may, as in these milder cases, in part represent the patient's attempt to compensate for the disruptive effect of the primary deficit. If he could tolerate the frustrations and failures associated with an attempt to retain his former level of functioning, the brain-damaged person could probably perform more effectively. Thus, in every case of brain damage there may be a margin of potential achievement that is not used spontaneously by the patient because of the painful efforts such attempts would entail. —From Authors' Summary.

471. MITCHELL, ANNA C., HARGIS, CHARLES H., McCARRY, FRANK, & POWERS, CHESTER. (Porterville State Hosp., Calif.) **Effects of prochlorperazine therapy on educability in disturbed mentally retarded adolescents.** *Amer. J. ment. Def.*, 1959, 64, 57-62. 34 mentally retarded adolescents were matched for age, sex, IQ, and severity of behavior disturbance. The mean age and IQ of each group was about 14 and 52, respectively. These groups were subdivided into more homogeneous units to attend school for one hour daily for 6 months. During this time one group received prochlorperazine (Compazine) and the other identical-appearing placebos. Before and after measures were obtained with the Arthur Point Scale, Ammons Full-Range, Vineland, Minnesota Rate of Manipulation, Psychological Rating Scale, and California School Achievement Tests. Both groups remained approximately stationary in all psychological measures. and achieved equally in the classroom. —J. W. Fleming.
472. MURSTEIN, BERNARD I. (University of Portland, Oregon) **The effect of long-term illness of children on the emotional adjustment of parents.** *Child Developm.*, 1960, 31, 157-171. The emotional adjustment of mothers and fathers of children having leukemia were compared to the adjustment of parents of children having some other type of tumor growth requiring extensive hospitalization. The actuarial data included age of patient, mother, father; number of children in family; number of years parents had been married; education of father, mother; religious faith of father, mother; frequency of church attendance for father, mother; disease of the child; occupation of father; extent of payment for medical care. Two pediatricians rated the amount of information given to the parents, the amount of discussion about the disease, the emotional adjustment of the parents, and their intellectual understanding of the disease. The nurses rated the parents' relationship to each other, to the child, and the parents' adjustment to the hospital routine. Psychological measures obtained included the Taylor Manifest Anxiety Scale, the Texas Religious Attitude Scale, and several scores derived from an analysis of the TAT stories. The results indicated the importance of cognitive and socioeconomic factors in adjustment to the disease. There was little difference between the adjustment of fathers and mothers. Interpersonal relationships played a stronger role in determining adjustment for the leukemias than for the other diseases. The effect of extensive communication from the physician to the parent concerning the nature of the disease was negative with regard to the emotional adjustment of parents of leukemic children and more positive for parents of nonleukemic children. The implications of these findings were discussed. —Author's Abstract.
473. MUUSS, ROLF E. (Goucher Coll., Baltimore, Md.) **A comparison of "high causally" and "low causally" oriented sixth grade children on personality variables indicative of mental health.** *Proc. Iowa Acad. Sci.*, 1959, 66, 388-394. Two tests served as selection criteria for "high" and "low" causally oriented groups, the Social Causal Test and the Physical Causal Test. They were administered to 280 sixth graders. The "highs" (N = 90) were defined as those above the group mean on both tests, "lows" (N = 73) as those falling below both means. The 12-item Intolerance of Ambiguity Scale and the 24-item Children's Antidemocratic Attitude Scale were administered to all subjects. The "highs" showed significantly less antidemocratic attitudes and less intolerance of ambiguity than the "lows." Intolerance of ambiguity and antidemocratic attitude were found to be correlated  $r = .41$  (N = 232). Differences between the "highs" and the "lows" remained significant when subjects were matched on IQ scores. —Author's Summary.
474. PETERSON, DONALD R., QUAY, HERBERT C., & CAMERON, GORDON R. **Personality and background factors in juvenile delinquency as inferred from questionnaire responses.** *J. consult. Psychol.*, 1959, 23, 395-405. Two "delinquency" scales were administered to 116 delinquents and 115 matched nondelinquents. A factor analysis of results suggests three factors in delinquency: "psychopathic personality"; a "neurotic" dimension including "impulsive anti-social behavior," "regret, depression, and other negative affect"; and "inadequacy." The authors feel that the first two are related to family dissension, the last to school difficulties.—E. E. Levitt.

475. PHILIP, B. ROGER (Assumption Univer. of Windsor), & PEIXOTTO, HELEN E. **An objective evaluation of brief group psychotherapy on delinquent boys.** *Canad. J. Psychol.*, 1959, 13, 273-280. An experimental group of 43 delinquent boys was given brief group therapy with the object of reducing their Hostility. A matched control group, equal in size, received no therapy during the three and one-half week period of this experiment, other than the ordinary "milieu" therapy of the Training School. Both groups were given a modified TAT at the beginning and at the end of the experiment. The major hypothesis that the experimental group would show a reduction of Hostility, as measured by the TAT, was confirmed within the 5% level of significance. Changes in the hypothesized direction of the TAT scores for the other four variables—Need for Achievement, Blandness, Insecurity and Guilt—occurred, but did not reach an acceptable level of significance. —Summary.
476. ROUSEY, CLYDE L. (Humboldt State Coll., Arcata, Calif.), GOETZINGER, C. P., & DIRKS, DONALD. **Sound localization ability of normal, stuttering, neurotic, and hemiplegic subjects.** *Amer. Arch. gen. Psychiat.*, 1959, 1, 640-645. In this study, 67 subjects—20 stuttering children, 20 normal children, 20 emotionally disturbed children, and 7 hemiplegic children—were tested for their ability to localize sound. In general, it was found that there was a marked inconsistency in their response pattern, although normal children were the least inconsistent. Further, it was noted that in terms of frequency of responses to binaural stimuli, stutterers tended to give more displaced responses, normal children, more head responses, and neurotic children, more ear responses. Under monaural stimuli, the major difference in the four groups was in the greater number of displaced responses found among the stutterers. However, all groups tended to show some variance in responses—sometimes suggesting they heard it in the head, sometimes in the ears, and sometimes outside the head. The results in general suggest the need for extensive re-evaluation of our earlier concepts regarding localization and of their possible neurological implications. —Authors' Summary.
477. SEITZ, PHILIP F. D. (Inst. for Psychoanalysis, Chicago, Ill.) **Infantile experience and adult behavior in animal subjects. II. Age of separation from the mother and adult behavior in the cat.** *Psychosom. Med.*, 1959, 21, 353-378. Employing the split-litter technique, the kittens from several litters of non-isogenic cats were divided into three experimental groups. Group I kittens were separated from their mothers at two weeks of age, which is early in this species and causes intense "crying" for as long as a week or more. Group II kittens were separated from their mothers when they were found to have begun lapping milk spontaneously from saucers. This usually occurred at around six weeks of age. Group III kittens were forced to go on suckling for 12 weeks, by making no food other than the mother's milk available to them. At 12 weeks of age they were removed from their mothers. Following separation from their mothers, the kittens in all three experimental groups were placed in identical, individual living cages, and their life experiences were standardized. When they reached adulthood, a series of behavioral tests were made. These tests revealed that Group I animals, removed from their mothers at two weeks of age, were the most randomly active, but showed the least goal-directed movements throughout their lives. They were the most anxious in novel situations. They were the most disturbed by and slowest to recover from intense stimulation. They were the most persistent but also most disorganized in their efforts to get food when hungry and frustrated. They were the most aggressive but least successful in feeding competitions. They had the least tendency to share food. They were the slowest to learn a simple feeding routine; but they were the least susceptible to severe, generalized feeding inhibitions in response to feeding conflict. Throughout their lives the Group I animals were more suspicious, fearful and aggressive in their behavior toward other cats and toward the experimenters. Following the feeding frustration tests, two of the Group I cats developed a chronic, asthma-like, respiratory wheezing syndrome that veterinary consultants were unable to diagnose. The condition had certain similarities to bronchial asthma in humans, raising the question whether the cat might be a useful experimental animal for psychosomatic research in asthma. . . . —Author's Summary.

478. SILLER, JEROME. (New York Univer., New York City) **Psychological concomitants of amputation in children.** *Child Developm.*, 1960, **31**, 109-120. Three psychologists, using case studies, rated 52 child amputees on their reactions to disability, parental acceptance, social sensitivity, and general adjustment. The findings for each variable and the interrelationship between variables were presented. 60% had adequate or better adjustment, 62% had at least average parental acceptance, and 58% no more than average sensitivity. The most frequent reactions to disability were denial of handicap, compensatory efforts, independence strivings, withdrawal manifestations, feelings of inferiority, dependence, and depression. The specific reactions to disability were categorized in terms of a teleological dichotomy which subsumed most as being concerned with restitution of the loss or avoidance of the loss. The empirical findings support the pragmatic fruitfulness and theoretical validity of the restitution-avoidance dichotomy. —Author's Summary.

479. SNYDER, ROBERT, & SECHRIST, LEE. (Rosewood State Training Sch.) **An experimental study of directive group therapy with defective delinquents.** *Amer. J. ment. Def.*, 1959, **64**, 117-123. 54 institutionalized, delinquent retardates with a mean age and IQ of about 20 and 60, respectively, were matched on the basis of a behavioral description and randomly assigned to a therapy, placebo, or no-treatment group. Therapy and placebo groups, with 9 members each, met one hour weekly for 13 weeks. Therapy sessions were planned, structured, and didactic, whereas placebo sessions were unstructured and nondirective. At termination the groups differed significantly in number of positive comments on routine housing reports. Other consistent trends, including a follow-up, are noted, but were not statistically significant. —J. W. Fleming.

480. SOLNIT, ALBERT J. (Yale Univer., New Haven, Conn.) **Hospitalization. An aid to physical and psychological health in childhood.** *Amer. J. Dis. Child.*, 1960, **99**, 155-163. In the study of a small group of children in whom developmental and physical problems were associated, hospitalization of the child with the mother has served to overcome both physical and psychological difficulties. The developmental problems included separation anxiety, lag in body mastery, and ambivalence conflicts. The physical health problems included severe anemia, malnutrition, and upper respiratory infections. Some of these children had been traumatized by a previous hospitalization which excluded the mother, and it is suggested that certain of their developmental problems were precipitated by this experience. The subsequent hospitalization, worked out as a helpful experience for both the child and the mother, has furthered the solution of these problems and promoted the healthy development of the child. Symptoms were replaced by adaptations. It is hypothesized that adaptive gains obtained in this way can be retained because they are the result of the child's experience with his mother as well as with the hospital personnel. This promotes the self-confidence of the mother and provides the child with a direct experience with the mother in which he has been able to use crisis for an advancement in development. —Author's Summary.

481. STIMSON, CYRUS W. (Letchworth Village, Thiells, N.Y.) **The treatment of cerebral palsy in mentally retarded patients using high-frequency, low voltage, electric currents.** *Amer. J. ment. Def.*, 1959, **64**, 72-80. 23 cerebral palsy patients with a median age of 17 and IQ of 36 received therapy and attendant care, training, and exercise for five weeks. In addition, 15 experimental patients received sedative action or "sedac" current bitemporally for one half hour two or three times weekly for a total of 12 treatments. Current was increased to the point of pain and maintained at this intensity. For 8 control patients the electrodes were placed bitemporally and the current increased to the point at which it first became perceptible, then turned off, the electrodes remaining in place for 30 minutes. Initial status and changes were evaluated by neurological exam, electromyography, dynametric determinations, and assessment of functional capacity. Although no marked or sustained relief of spasticity or significant improvement in ability to carry out the activities of daily living were obtained, several aspects of temporary relief and improvement were noted. —J. W. Fleming.



**482. SUBOTNIK, LEO, & CALLAHAN, ROGER J.** (Des Moines Still Coll. Osteopathy & Surgery, Iowa) **A pilot study in short-term play therapy with institutionalized educable mentally retarded boys.** *Amer. J. ment. Def.*, 1959, **63**, 730-735. Eight institutionalized educable mentally retarded boys, 8 to 12 years old, nominated for treatment by teachers and cottage parents, were given a short-term series of individual play therapy sessions. Several quickly administered tests—Children's Anxiety Pictures, Auditory Memory for Digits, Vocabulary, Draw-a-Person, and Bender-Gestalt—were obtained from the subjects eight weeks before therapy, immediately before therapy, after eight weeks of therapy, and after eight weeks follow-up. Improvement during the therapy period and during the therapy plus follow-up period were compared with improvement during the eight weeks without treatment. Results on all tests were negative. Behavior ratings on six categories of behavior by teachers and cottage parents were obtained at the beginning and end of therapy, but differences also proved nonsignificant. —From Authors' Summary.

**483. TANAKA, FUZIO.** **Rorschach movement responses in relation to intelligence.** *Jap. J. educ. Psychol.*, 1958, **6**, 85-91. Subjects of this investigation were 100 male juvenile delinquents whose mean age was 18 years 2 months. All were administered the Rorschach and Wechsler-Bellevue tests. The Rorschach was scored by the Klopfer system. Results: (1) Human movement M correlates with each of the Wechsler scores, Verbal, Performance, and Full Scales at the 2% level of significance or above. Examination of the subtest correlations reveals that M correlates highest with similarities (.376), but insignificantly with object assembly (.082). Mh shows the highest biserial correlation with the Full Scale IQ (.471), but Mt and Ma correlate insignificantly with the Full Scale IQ (.073, .286). (2) Animal movement. FM shows no correlation with W-B IQ. FMa and FMt similarly correlate insignificantly with the W-B Full Scale IQ. Significant correlation (5% level) was found between FMt and the Performance Scale IQ. (From English Summary)—A. Grams.

**484. TAPIA, F.** (St. Louis Co. Hlth Dept., Missouri), **JEKEL, J., & DOMKE, HERBERT R.** **Enuresis: an emotional symptom?** *J. nerv. ment. Dis.*, 1960, **130**, 61-66. The relationship between enuresis and emotional disturbance was investigated in a sample of 830 white third-grade children. From a parent questionnaire, 10% of this group was classified enuretic (children currently wetting their bed at least once a month). The 830 children were grouped into a nondisturbed and disturbed group on the basis of teacher or social worker ratings. The difference in the percentage of enuretics falling into either group was not significant. A comparison was made of the incidence of enuresis with the number of behavior problem symptoms reported by the mother. No significant increase in the incidence of enuresis was found with an increase in the number of symptoms. Essentially the same results were found using teacher's reporting of symptoms. Also, no significant correlations were found between enuresis and other behavior symptoms. The authors conclude, "It appears that enuresis is but an ubiquitous happenstance, the frequency of its appearance being more related to age cut-off point and other statistical mechanics than to adjustment, other emotional symptoms, or future prospects of mental ill-health." —A. J. Hafner.

**485. THORPE, J. G.** (Banstead Hosp., Sutton, Surrey) **The value of teachers' ratings of the adjustment of their pupils.** *Brit. J. educ. Psychol.*, 1959, **29**, 207-212. In order to test the relationship between teachers' ratings of adjustment and maladjustment and more objective estimates obtained by psychological testing, three groups of 36 children each were selected by teachers (most adjusted, least adjusted, and randomly selected group). They were administered the Thurstone PMA test of intelligence together with 7 questionnaire type tests designed to elicit information about social and personal adjustment. In addition, 15 items testing motor ability were administered. The entire battery was called the Maudsley battery of neuroticism tests. Test means, standard deviations obtained by the three groups, as well as "F" ratios of significance levels were computed. The results indicated that only 2 of the 22 measures of neuroticism (sociometric test and mirror drawing) showed statistically signifi-



cant differences between the three groups of children selected by teachers. It was concluded that teachers' ratings bear little relationship to assessments of neuroticism obtained by the psychological tests. —W. D. Smith.

## PUBLIC HEALTH AND HYGIENE

**486. BLUM, HENRIK L.** (Contra Costa Co. Hlth Dept., Martinez, Calif.), **PETERS, HENRY B., BETTMAN, JEROME W., FELLOWS, VICTOR, Jr., & JOHNSON, FRANK.** **Design and evaluation of a vision screening program for elementary school children.** *Amer. J. publ. Hlth*, 1959, **49**, 1670-1681. A screening program was undertaken in Orinda School District in 1954 in which some eight procedures were compared with one another and with clinical examinations. The most effective technique was found to be the "Modified Clinical Technique" administered in the school by an optometrist. Other tests made relatively more overreferrals or missed more children needing referral. MCT was also found to be the least expensive to the community when cost of overreferrals was taken into account. Children passing the MCT need be tested annually thereafter only with the Snellen test. Children who failed the latter can then be screened by the MCT. Children failing the MCT should be referred for professional vision attention. Other recommendations are made for a public health program in this field. —I. Altman.

**487. BURNEY, LEROY E.** (Public Hlth Service, Washington, D.C.) **Current status of live poliovirus vaccine.** *J. Amer. med. Ass.*, 1959, **171**, 2180-2182. The committee on live poliovirus vaccines established by the Public Health Service has recommended that a virus strain be considered satisfactory only if its neurovirulence is demonstrated to be low. The strain must also demonstrate inability to revert to significant neurovirulence after passage in human beings. Current strains have indicated a potential for reversion to virulence. "In the meantime, there should be no abatement of full use of the demonstratedly effective Salk vaccine." —I. Altman.

**488. CURBELO, ANTONIO ARBELO.** (Pédiatre-Puériculteur de l'Etat, Spain) **Evolution de la mortalité infantile en Espagne (1901-1956).** (The course of infant mortality in Spain (1901-1956). *Courrier*, 1959, **9**, 481-483. In this work is studied the course of child mortality in Spain since the beginning of the 20th century. The influence of the decreased rate of this extraordinary demographic phenomenon on general mortality and vital rest is especially considered. The decrease in mortality rate especially slow during the 40 first years, broken by two strong increases, due to the demographic crisis of 1918-1920 and 1936-1940, and very rapid after 1942. The very high rate (186) at the beginning of the century becomes fairly high in 1943 and rapidly moderate in 1952, being nearly low (42) in 1958, thus confirming the data shown by the line of general trend and that of the last normal short period. —English Summary.

**489. FARRER, SANFORD M.** (Communicable Disease Center, U. S. Public Hlth Ser., Atlanta, Ga.), **RUSSO, RICHARD, BAVARA, CAMILLE, & WERTHAMER, SEYMOUR.** **Surveillance and control of staphylococcal infections in a maternity unit.** *J. Amer. med. Ass.*, 1959, **171**, 1072-1079. In an outbreak of staphylococcal infections among newborn infants and mothers at a small community hospital case-finding of infections was achieved . . . principally by a telephone survey of mothers six weeks after delivery. The telephone survey was found to be a rapid, efficient, and accurate case-finding technique. . . . Among the measures employed to control the epidemic . . . were removal of hospital personnel who were nasal carriers of 80/81 strain from the nursery, improvement of aseptic techniques, discharge of infants and mothers three days after delivery, and compulsory rooming-in of the infant with the mother. It is concluded that rooming-in was the single most important step in the termination of the outbreak. —From Authors' Summary.

**490. GINSBERG, HAROLD S.** (Western Reserve Univer. Sch. Med., Cleveland, Ohio) **Newer aspects of adenovirus infections.** *Amer. J. publ. Hlth*, 1959, **49**, 1480-1485. The literature and data obtained in recent years are summarized. A large proportion of children in the first three years of life are infected by adenoviruses, usually types 1 and 2. Whether these initial infections are associated with illness is not certain, or whether the fact that the virus can persist for years in tonsils and adenoids is associated with recurrent respiratory disease. Type 3 effects its greatest morbidity in children 4 to 15 years old. This agent, however, has not been demonstrated to induce prolonged infection of tonsils and adenoids. Types 5, 2, 1, and 7, in order of decreasing frequency, may also cause disease in this age group. —I. Altman.

**491. HARTMAN, EVELYN E., WALLACE, HELEN M., WECKWERTH, VERNON, & DAVIS, EUNICE A.** (Univer. of Minnesota Sch. Public Hlth, Minneapolis) **Health problems of infants and preschool children.** *Amer. J. Dis. Child.*, 1960, **99**, 67-73. The major causes of postneonatal mortality in Minneapolis infants are congenital malformations, pneumonia and influenza, and accidents. The major causes of mortality in Minneapolis preschool children are accidents, congenital malformations, pneumonia and influenza, and cancer and leukemia. In a study of infants and preschool children attending the Well Child Conferences in Minneapolis, the two most frequent causes of health problems were congenital malformations and infections, followed by allergy, nutrition, trauma, and tumors. Analysis of health problems by system revealed that skin problems, respiratory diseases, cardiovascular disease, and orthopedic, allergic, genitourinary, and nutritional disorders were the commonest. Health problems were more frequent in the nonwhite and in the male. 8% of the children had had an accident. Accidents were more frequent in children during their second and third years and in the nonwhite and male groups. The most frequent type of accident was falls. The major causes of mortality and morbidity in postneonatal infants and in preschool children are similar. All but 7.5% of the recommendations given to families were followed. Infants in the first year of life had the lowest percentage of missed appointments; older preschool children had a higher percentage. Over half of the children who had missed an appointment had a health problem. Missed appointments were more frequent in the nonwhite group. The implications of some of these findings are discussed. —Authors' Summary.

**492. HILL, I. N., BLAYNEY, J. R., & WOLF, W.** **The Evanston Dental Caries Study. XIX. Prevalence of malocclusion of children in a fluoridated and control area.** *J. dent. Res.*, 1959, **38**, 782-794. Data gathered in children 6 to 8 and 12 to 14 years of age; examinations divided into pre-fluoride, fluoride, and fluoride-free groups. Frequency of malocclusion in 6 to 8 year group after 8 years fluoridation was 20.48% less than pre-fluoride base-line of 6 to 8 year children. The 12 to 14 year group, after 10 years fluoridation, similarly showed 17.03% decrease in malocclusion. Prevalence malocclusion in fluoride area in 1955 and 1957 was about same as in 1956 control area. In a 9 year period control area showed increase of malocclusion of 11.76% in 6 to 8 group, 7.84% in 12 to 14 group. The authors conclude: "From our observations of the data available at this time, we feel that no definitive statement can be made regarding fluoridation and its effect on the prevalence of malocclusion." —W. M. Krogman.

**493. JACOBZINER, HAROLD.** (New York City Dept. Health) **Causation, prevention, and control of accidental poisoning.** *J. Amer. med. Ass.*, 1959, **171**, 1769-1777. Of 23,862 accidental poisonings (exclusive of gas poisoning) reported to the New York City Control Center from March, 1955, through December, 1958, 54.7% occurred in persons under 20 years of age. Of 13,609 poisonings in this group, 84.4% occurred in children under 5 years of age. The children under 20 involved in poisonings were similar to the average in mental and physical characteristics, but a definite correlation was found with socioeconomic conditions and availability and accessibility of poisonous substances. High incidence was related to a lack of adequate supervision, careless handling, and lack of caution and experience. Five toxic agents were respon-

sible for 30% of the total poisonings among children: aspirin, especially flavored aspirin preparations for babies, bleaches, lead, barbiturates, and lye. 70 deaths occurred in the 13,609 poisonings, with lead poisoning causing 51 of them. —I. Altman.

**494. JENÍČKOVÁ, JARMILA, & ZAHÁLKOVÁ, ANNA.** *Výsledky očkování proti tuberkulóze v praze v období od R. 1947 do R. 1957.* (The results of anti-tuberculosis immunization in Prague in the period from 1947 to 1957.) *Cesk Pediat.*, 1959, **14**, 1096-1105. The results of immunization against tbc from 1947 to 1957 in Prague children and youth are presented. The immunization rate is continually rising, and in 1957 reached 98.3%. Primary complexes are continually falling, and in 1957 reached 0.3%. The effectiveness of immunization was tested after five years in a group of school children who had received Danish vaccine in 1948/9, and effective levels were found in 92.7%. Mortality rates in the immunized group were far less than in the nonimmunized group. A detailed analysis shows that only nonimmunized children died. In 1957, there were no deaths from tbc. There has been a far more marked decline in morbidity due to tbc among children than adults from 1948. In 1957, of 100 cases of recurrence, 35 were immunized, 65 were not. Of these 1 came down with miliary, 2 with meningitis and only 2 with a finding of a stage of degeneration. In the immunized group morbidity was 0.015%, in the nonimmunized 0.4%. In conclusion practical results are discussed for the BCG program. —English Summary.

**495. KRESKY, BEATRICE** (South Nasson Communities Hosp., Oceanside, N.Y.), & **ELIAS, HERBERT L.** *Epidemiology of staphylococcal infection in nursery of small community hospital.* *J. Amer. med. Ass.*, 1959, **171**, 1080-1085. A sharp outbreak of infection in the hospital nursery led to the following measures: (1) complete isolation of all infected infants and infants with positive nose and throat cultures, (2) prophylactic administration of erythromycin to all newborn infants, and (3) temporary severance from duty of nurses harboring staphylococci in the nasopharynx. Number of cases then decreased sharply. An inquiry was made among the physicians of the community about the number and type of infections in mothers and infants under their care. Cases developing at home were greater in number and clinically more severe than the nursery cases. It is suggested that among procedures for control of infection in the nursery and community should be (1) reporting of all cases to the local health department and (2) a questionnaire to the mother when an infant is 2 months old. —I. Altman.

**496. MIAN, KHURSHID A.** (St. Joseph Mercy Hosp., Ann Arbor, Mich.) *Isolation of enteropathogenic escherichia coli from household pets: Relation to infantile diarrhea.* *J. Amer. med. Ass.*, 1959, **171**, 1957-1961. Evidence would appear to be quite convincing that enteropathic *Escherichia coli* is a cause of much infantile diarrhea. Hence, its investigation in household pets is important. A bacteriological investigation in 321 household pets (their selection is not clear), 237 dogs and 84 cats, showed 12.5% to be carriers of serotypes, with the incidence highest in the summer months. Epidemiologic study in the case of an 11-month-old infant hospitalized for gastroenteritis revealed that a dog in the household was the specific source of infection. —I. Altman.

**497. MITCHELL, HAROLD H.** (Montgomery Co. Dept. Public Hlth, Rockville, Md.), & **PEEPLES, WILLIAM J.** *Newer concepts of school health services.* *J. Amer. med. Ass.*, 1959, **171**, 2060-2064. For the effective care of a school child with either physical or mental handicaps a complete diagnostic picture is essential. It cannot be provided by the parent or the physician or the teacher separately, for each sees different aspects of the child's problem. Various ways of bringing together the necessary information are here described. A school medical adviser can review the available data with the school psychologist and then discuss the findings with the private physician. In communities where there are medical schools, diagnostic evaluation centers can be set up and their findings interpreted to the family by the general practitioner or the pediatrician. In any case, the diversity of health, behavior, and learning problems is such that the school health program must be viewed as a team-

work project with emphasis on the role of private medical practice. —Journal Summary.

**498. MITCHELL, ROSS G.** (Univer. of St. Andrew's, Queen's Coll., Dundee, Scotland) **Medical aspects of a comprehensive survey of cerebral palsy.** *Cerebral Palsy Bull.*, 1959, No. 7, 32-41. A survey in Eastern Scotland of cases of cerebral palsy up to 21 years of age showed the incidence to be 2.0 per 1000. Of the 240 cases found, 42.7% were classified as mildly handicapped. By type, 78.3% had spastic cerebral palsy, 37.1% had spastic hemiplegia, and 19.2% had spastic tetraplegia. Analysis of obstetrical histories showed an association between the cerebral diplegia syndrome and premature birth. Advanced maternal age and forceps delivery seemed important in the etiology of cerebral palsy, especially of the athetoid type. Of the 240 cases, 29 were of postnatal origin, the commonest causes being acute infantile hemiplegia, kernicterus or meningitis. —I. Altman.

**499. MOSCOVICI, CARLO** (Univer. Colorado Med. Center, Denver), **GINEVRI, ADRIANO, & KEMPE, C. HENRY.** **The distribution of poliomyelitis and ECHO viruses in a children's institution.** *Amer. J. Dis. Child.*, 1959, **98**, 139-143. The incidence of enterovirus infections has been studied in 416 apparently healthy children under 2 years of age during the period January-August, 1956, in Rome and simultaneously for a whole year in a newborn nursery of the same institution. Polio and ECHO viruses were commonest representatives of the enterovirus group found; a few adenoviruses were recovered. Only Type 2 of poliovirus was isolated from the older children (13.4%), as well as ECHO (16.1%) and 6 adenoviruses (1.4%). Six different types of ECHO are represented with a predominance of ECHO Type 15 (55.2%). Polio Type 2 and Type 3, ECHO, and adenoviruses were isolated in the newborn nursery. Here, also, ECHO Type 15 was the predominant strain (32.4%) among the ECHO group. No Polio Type 3 occurred in any child who did not previously have Polio Type 2 excretion. —Authors' Summary.

**500. OPPENHEIMER, ELLA** (Dept. Public Hlth, Washington, D.C.), & **MANDEL, MARGARET.** **Behavior disturbances of school children in relation to the preschool period.** *Amer. J. publ. Hlth*, 1959, **49**, 1537-1542. The work of the School Health Services' Psychiatric, Diagnostic and Counselling Clinic in the District of Columbia is described. To explore the possibilities of prevention 60 case records were reviewed in detail. Time of onset of the problem was stated to be in the preschool period in 32 cases and in the kindergarten in 20. Mental retardation was not a factor. The majority of the children grew up under socially and emotionally handicapping conditions, including marital problems between parents and problems between parent and child. The histories showed frequent indications of poor handling of such behavior as thumbsucking, jealousy of a new baby, angry feelings toward parents. Community preschool child health clinics are needed. The general practitioner and pediatrician can do much preventive work through interpretation and counselling, through appropriate referral, and through participation in community action to develop social services for an effective preventive program. —I. Altman.

**501. SABIN, ALBERT R.** (Univer. of Cincinnati Coll. Med., Ohio) **Status of field trials with an orally administered, live attenuated poliovirus vaccine.** *J. Amer. med. Ass.*, 1959, **171**, 863-868. Between October, 1958, and early September, 1959, about 11 million children outside the United States received by mouth a vaccine prepared from strains of poliovirus that had been selected and studied in this country by the author. Preliminary studies had shown that the establishment of these strains in susceptible persons was neither associated with any distinct illness nor was it followed by detectable late manifestations in the nervous system. The spread of the three vaccine strains was comparable to that of the naturally occurring viruses. The presence of other viral intestinal infections sometimes suppressed the multiplication of the orally administered poliovirus vaccines. In the absence of interference, antibody was demonstrable within 7 to 10 days after infection. A large body of evidence now indicates that the live vaccine is safe for both the vaccinated children and the community. —Journal Summary.

**502. TALLQUIST, H.** (Aurora Hosp., Helsinki) **Poisoning in children.** *Ann. paediat. Fenniae*, 1959, **5**, 258-268. The children's outpatient department of the Aurora Hospital in Helsinki has received 10,703 children as emergency cases since March 1956. Of them, 315 (2.9%) were received for suspected or real poisoning. 86% of the cases of poisoning were under 5 years of age. The largest part consisted of 1-year-olds. 56.8% of all the cases occurred during the second and third years of life. The incidence was higher among boys than girls. Drugs were the cause of the poisoning in 60.3%. Next in the order was the group techno-chemical agents (31.4%). There were few cases of tobacco poisoning, 3.5% of the total material and 4.1% of them among children up to 5 years old. Sedatives or preparations containing sedatives caused over a third of the drug poisonings. Next in drug poisonings came cough medicines, antipyretics and antihistaminics. The techno-chemical agents divided into the following subgroups: materials used in households, e.g., turpentine, concentrated vinegar, beeswax (10.8%); anti-moth agents, insecticides and rat poison, plant fertilisers and plant protectants (8.7%); detergents (6.7%); dyestuffs (3.5%); perfumes etc. (2.1%). A total of 289 cases of poisoning were caused by 160 different preparations or materials. The 1957 incidence of poisonings was 3.5 per 1,000 children. This figure concurs fairly well with the incidence of poisonings in the city of Stockholm. . . . Distribution of the parents into three different social groups gave the following ratios: 46.8% of the children came in the lowest, 25.4 in the middle and 27.8 in the highest social group. —From Author's Summary.

**503. TALLQVIST, H., & KORPELA, A.** (Aurora Hosp., Helsinki) **Infantile mortality from accidental poisoning in Finland.** *Ann. paediat. Fenniae*, 1959, **5**, 269-274. 145 children under 5 died of poisoning in 1948-57 in Finland. The ratio was 3.1 per 100,000 children and per annum. This was higher than the corresponding figure in England and for the white population in the USA during 1940-1949. Of the fatal cases, 73.1% occurred among children 1 to 3 years of age. 82.1% of the deaths were in rural districts, 88.8% of the children's parents belonged to the lowest social group. The cause of death, in order, was: drugs (44.1%), corroding materials (18.6%) such as lye (10.3%) and acids (8.3%) and plant protectants (bladan) (15.2%). Fox poison (strychnine) and rat poison (cyanide) and insecticides (nicotine, lindane, fluorine) together caused 10.3% of the fatalities. Of the drugs the principal culprit was sedatives and then antihistaminics. Comparison of the five-year periods 1948-1952 and 1953-1957 revealed an increase in the number of deaths by drug poisonings. Deaths from sedatives and antihistaminics, numerically the biggest drug groups, also increased. The previously common cause of death, lye, disappeared completely. A sharp increase was established in the number of fatal cases due to poisoning by plant protectants (bladan). —Authors' Summary.

**504. TOTH, K., & SZABÓ, I.** **Dental conditions of preschool children (1-6 years of age) in Szeged, Hungary.** *J. dent. Res.*, 1959, **38**, 451-463. The deciduous teeth of 2699 children were studied; for these teeth a "df index" (decayed, filled) was calculated. No sex difference in caries frequency was noted. The df count is 0.15% at 2 years, 4.85% at 4 years. Caries begins prior to first birthday, by circular decay of anterior teeth. In caries attack the fourth year is "the critical year" for vulnerability. Prophylaxis, not therapeutic measures, is the answer! —W. M. Krogman.

**505. WALLACE, HELEN E.** (Univer. of Minnesota, Minneapolis) **The operation of a register for children with cerebral palsy.** *Cerebral Palsy Rev.*, 1959, **20**(2), 7-9. A register is an up-to-date file containing services received, school placement information, hospitalizations, recommendations made and action taken. A successful register requires that there be promotion of early case finding and reporting of patients. It has a role in the "estimation of prevalence, provision of follow-up, evaluation of case finding, study of provision for services and unmet needs, use as a beginning in a retrospective study of etiology, study of results to the patient in evaluation of the effectiveness of the program, and study of referral of teen-agers and young adults for vocational services." —I. Altman.



**506. WINKELSTEIN, WARREN, Jr.** (Univer. Buffalo Sch. Med., N.Y.), & **GRAHAM, SAXON.** *Factors in participation in the 1954 poliomyelitis vaccine field trials, Erie County, New York.* Amer. J. publ. Hlth, 1959, 49, 1454-1466. An analysis of the characteristics of the participators and nonparticipators in the Poliomyelitis Vaccine Field Trials of 1954 in Erie County, New York, has been carried out. Data were available on each of the 54,435 children in grades one through three eligible to participate in the trials. It was found that: (1) Nonwhites participated more than whites. (2) Participation declined as age increased. (3) Children living in communities outside of Buffalo participated more than did children with residence in the central city. (4) Participation increased with increase in economic status as measured by median rental in Buffalo and first-ring suburbs. (5) There was a direct relationship between education of parents and participation in Buffalo. When this was examined for economic quartiles separately, the relationship all but disappeared in the lower half of the population. (6) There was an inverse relationship between percentage of foreign-born persons in Buffalo census tracts of the lower three economic quartiles and a direct relationship in the highest quartile. (7) Children attending parochial schools participated less than those attending public schools throughout the country. (8) In townships outside of Buffalo, there was a direct relationship between participation and incidence of poliomyelitis during the two preceding years. —From Authors' Summary.

**507. Advisory Council on Child Welfare Services. Child Welfare Services: Report of the Advisory Council.** Soc. Security Bull., 1960, 23(2), 3-9. The Advisory Council was appointed by the Secretary of Health, Education, and Welfare to advise on implementing recent child welfare amendments to the Social Security Act. In this report, it is recommended that the Federal government pay part of the total cost of public child welfare services of each State through grants-in-aid on a variable matching basis, with provision for an open-end appropriation; that grants be made available for research organizations and other agencies for demonstration and research projects in child welfare; that grants be established for the training of personnel. A strong recommendation is made that the Children's Bureau be strengthened through additional personnel; it should be provided with the means for studying the basic causes of family disruption. A new definition of child welfare services is proposed: "Child welfare services are those social services that supplement, or substitute for, parental care and supervision for the purpose of: protecting and promoting the welfare of children and youth; preventing neglect, abuse, and exploitation; helping overcome problems that result in dependency, neglect or delinquency; and, when needed, provide adequate care for children and youth away from their own homes, such care to be given in foster family homes, adoptive homes, child-caring institutions or other facilities." —I. Altman.

**508. Report on children's institutions in Holland.** Int. Child Welf. Rev., 1959, 13, 8-31. This study was made by a research team composed of specialists in the fields of institutional care, child psychiatry, child psychology, pediatrics, nutrition, teaching, vocational training, leisure time activities, and finance. A sample of 38 homes was chosen from approximately 400 existing child welfare institutions in Holland. The data were collected over a period of three years, from 1951-1954. Findings were grouped under general care, education, therapy, personnel, building, and finance. The findings indicated that the needs of institutionalized children are greater and more complex than those of ordinary children. With half the staff in these institutions unqualified, it seems unlikely that these needs will be met unless the standard of work is raised to the required level. —R. Highberger.

#### HUMAN BIOLOGY AND DEMOGRAPHY

**509. CHAPPELL, JAMES A., & KELSEY, WESTON M.** (Bowman Gray Sch. Med., Winston-Salem, N.C.) *Hereditary nephritis.* Amer. J. Dis. Child., 1960, 99, 401-407. Five persons, representing two kinships, are presented. These children



all manifest the symptom complex of nephritis with associated nerve deafness. The laboratory, clinical, and pathological findings of this syndrome are presented. Genetic aspects of the complex are discussed. —Authors' Summary.

**510. CURTIS, ELIZABETH.** (Hosp. for Sick Children, Toronto, Canada) **Cleft lip and palate in twins and offspring of twins.** *Cleft Palate Bull.*, 1959, **9**, 60-61. In an analysis of data on 124 pairs of twins, cleft lip (with or without cleft palate) was found in both twins in 43.5% of the monozygotic twins but in only 5.3% of the dizygotic pairs. The percentage of isolated cleft palate in both twins was about the same in the two groups. These results, together with those obtained from a study of children of 10 sets of twins, support a theory of differential genetic influence in cleft lip (with or without cleft palate) and isolated cleft palate.

**511. GIBSON, DAVID, & FRANK, HAROLD F.** (Ontario Hosp. Sch., Smiths Falls, Canada) **Dual occurrences of mongolism in two sibships.** *Amer. J. ment. Def.*, 1959, **63**, 618-620. An attempt is made to compare and contrast 11 common indices of mongolism for two sibships in which there is a double occurrence of mongolism. Indications are for the random distribution of symptomatology for each sib pair, greater intellectual retardation in the first affected sib, and greater pathological involvement in the second affected sib. —From Authors' Summary.

**512. LESSING, ELISE ELKINS.** (Illinois Inst. for Juvenile Res.) **Mother-daughter similarity on the Kuder Vocational Interest Scales.** *Educ. psychol. Measmt*, 1959, **19**, 395-400. On 6 out of the 10 scales significant correlations were obtained for 54 mother-daughter pairs. Random matching did not lead to any significant correlations. No position is taken regarding the relative contribution of nature and nurture to the documented similarity. —S. G. Vandenberg.

**513. MONTAGU, ASHLEY.** (Princeton, N.J.) **Natural selection and the origin and evolution of weeping in man.** *Science*, 1959, **130**, 1572-1573. Tearless crying in the young of early man, with an increased dependency period, would repeatedly have caused dehydration of the mucous membranes, and thus have rendered them vulnerable to the insults of the environment. Tears are bacteriostatic as well as moistening. The hypothesis is advanced that natural selection favored those infants who could produce tears, and that in this way the function became established in man. —Abstract.

**514. OLIVER, WILLIAM J.** (Univer. Michigan Med. Center, Ann Arbor), & **COLLINS, WILLIAM R.** **Combined familial proteinuria and hypercholesteremia.** *Amer. J. Dis. Child.*, 1960, **99**, 261-275. The results of an investigation of a family group demonstrating proteinuria and hypercholesteremia are presented. Despite the remarkable coincidence of two separate traits occurring in one family, the accumulated data suggests the interpretation that the kindred manifest two distinct but unrelated abnormalities, namely, proteinuria, with an associated increase of serum  $\alpha_2$ -globulin, and hypercholesteremia, with an associated increase of serum  $\beta$ -globulin. The traits were demonstrable both separately and in combination, and the occurrence together did not produce an increase of the severity of either. —Authors' Conclusions.

**515. ROBINSON, MARGARET G., & KAPLAN, S. A.** (Univer. of New York, Downstate Med. Center, Brooklyn) **Inheritance of vasopressin-resistant ("nephrogenic") diabetes insipidus.** *Amer. J. Dis. Child.*, 1960, **99**, 164-174. Insufficient facts are available at present upon which to base firmly a theory of the mode of inheritance of vasopressin-resistant diabetes insipidus. With the data available, however, it appears that the most likely mode of inheritance is as an autosomal dominant with decreased penetrance and expressivity in the female and variability in expressivity and possibly decreased penetrance in the male. More pedigrees must be found with male-to-male transmission to prove this mode of inheritance. More knowledge regarding the basic physiological and biochemical defect is necessary before the question of whether the abnormality is due to a mutant gene in a single allelic pair of genes or in any one of multiple allelic pairs of genes can be settled. The possibility exists that

there is more than one type of inheritance of vasopressin-resistant diabetes insipidus. If the symptomatology can be caused by a defective gene in more than one locus, then there may be multiple modes of inheritance. In such a case the two mechanisms of inheritance that appear most likely are sex-linked dominant and autosomal dominant inheritance. It is improbable that any of the pedigrees would demonstrate a sex-linked recessive mode of inheritance if all of the women in the pedigrees published earlier had been tested for renal concentrating ability. The increased early death rate of females as compared with the mortality rate of males in these families appears to be significant and may reflect a severer form in females, resulting in early deaths. Since the early mortality rate of offspring of apparently normal fathers married to normal women is similar to the mortality rate of offspring born to one affected parent, the penetrance in males may not be complete or the expressivity in these males may be so slight as to hinder detection of abnormalities in them by routine questioning. More thorough questioning and testing of renal function of all members of a family with a person afflicted with vasopressin-resistant diabetes insipidus must be done before the final answer as to the type of inheritance can be obtained. —Authors' Summary and Conclusions.

**516. SAWA, HIDEHISA.** *An analysis of identical twins' intelligence.* Jap. J. educ. Psychol., 1958, **6**, 41-45. The author tested 103 pairs of twins (48 pairs of boys and 55 pairs of girls) between the ages of 6 and 15, living together in their family home. On the Wechsler Intelligence Scale for Children, full scale IQ showed a correlation between identical twins of .934 and with the Tanaka-B group test a correlation coefficient of .829 was obtained. The author adds the note that performance on the comprehension, picture completion, picture arrangement, object assembly sub-tests of the WISC are strongly influenced by emotional frustration, and that the male pairs are more significantly influenced in their responses to items on the comprehension, object assembly, digits and digit symbol by their character and environment. The English summary gives no further elaboration on these statements. (From English Summary)—A. Grams.

**517. SCHULL, WILLIAM J.** (Univer. Michigan Med. Sch., Ann Arbor), & **NEEL, JAMES V.** *Atomic bomb exposure and the pregnancies of biologically related parents: A prospective study of the genetic effects of ionizing radiation in man.* Amer. J. publ. Hlth, 1959, **49**, 1621-1629. During 1948-1953, observations were obtained on 5163 registered pregnancies occurring in Hiroshima and Nagasaki to parents related as first cousins, first cousins once removed, or second cousins. "There are a number of reasons why the geneticist is inclined to view the latter pregnancies of related parents as potentially a more sensitive index of radiation-induced genetic damage. In its simplest terms the main line of the argument is that the addition of radiation-induced mutants to the more homozygous, and presumably less elastic, genetic background of inbred children may produce a relatively greater effect than would be apparent if the same mutants were super-imposed on the more heterozygous genetic background of noninbred children, that is, children born to unrelated parents." Information was available for classifying them according to varying degrees of radiation exposure. However, analysis of the observations by various statistical techniques failed to reveal any significant effect on major congenital defect or on perinatal deaths. The authors state that each such "negative" study serves to further isolate the "critical range" wherein the search for genetic differences must be made. —I. Altman.

#### EDUCATION

**518. ABRAMSON, DAVID A.** *The effectiveness of grouping for students of high ability.* Educ. Res. Bull., 1959, **38**, 169-182. This study set out to investigate the relationship between ability grouping in high school and subsequent college success. Graduates of four high schools who had been admitted to and completed two years

at a liberal arts college made up the group studied. Final sample included 48 qualified graduates (8 men and 8 women from each of three intelligence levels: 115-24, 125-34, 135-60) of each of the schools. One school placed gifted students in heterogeneous classes and left enrichment to the discretion of the teacher. A second school provided some honors classes for superior pupils. The third offered a more extensive program on "honors school" for its extremely able pupils, and the fourth school was a special school for gifted children in which pupils were admitted only on the basis of a special examination. No significant differences in performance during the first two years of college were discovered among the graduates of these varied school programs. The author says that no superiority of preparation for college can be claimed for either the special high school or the honor class program as contrasted with the comprehensive program which groups students heterogeneously (control group). General achievement of students when judged by grade-point averages and honors is associated with level of intelligence. —A. Grams.

**519. BARGER, WILLIAM CALVER.** (New York City Bureau of Child Guidance) **Late reading in children: A review of its origins with discussion of a correcting device for the aphasic type.** *Cerebral Palsy Bull.*, 1959, No. 7, 20-26. Late reading may have several origins; the area of aphasia should not be overlooked in the diagnostic evaluation. A technique is described in which the pupil starts by learning to read well in a mirror. It is employed when strephosymbolia (twisting of symbols) and mixed lateral dominance are present. "The technique produces the best results when there are no collateral aphasic handicaps with the reading disability, particularly conceptual aphasic elements." —I. Altman.

**520. CHAMBERS, JACK A.** (Board of Educ., Lansing, Mich.) **Preliminary screening methods in the identification of intellectually superior children.** *Except. Child.*, 1959, 26, 145-150. In the first of two studies several group intelligence tests were administered to a third grade class and to a group of intellectually superior (WISC Full Scale Score 125 or higher) elementary school children. Results were compared with scores on the WISC. The Primary Mental Abilities Test resulted in the most desirable combination of effectiveness and efficiency. In a second study it was found that 60% of false positives (nonintellectually superior children who had passed the PMA screen) could be eliminated (without eliminating true positives) by using the WISC VIBS subtests as a screen following the PMA, before administering the Full Scale WISC. —From Author's Summary.

**521. CLARICE, ANN.** (Manor Hosp., Epsom, Surrey, England) **Teaching imbeciles industrial skills.** *Cerebral Palsy Bull.*, 1959, No. 6, 14-18. A number of studies are summarized to show that the clinician's pessimistic viewpoint about learning by imbeciles is "both correct and incorrect." The picture presented after special training can be quite encouraging—while initial ability is exceedingly low they can learn simple tasks if given sufficient time for achievement. The imbecile is very much affected in the learning situation by suitable incentives. The task needs to be broken down into basic constituents and taught in the right sequence. Correct movements must be insisted upon from the very start. Many short periods of learning are better than few long ones. —I. Altman.

**522. EDGERTON, HAROLD A.** **Two tests for early identification of scientific ability.** *Educ. psychol. Measmt.*, 1959, 19, 299-304. Preliminary forms of a checklist of 258 activities and a 75 item multiple choice vocabulary test were given to groups of boys and girls in the sixth and seventh grade as a first step in developing these new tests. —S. G. Vandenberg.

**523. GOLDWORTH, MARY.** (Sunnyvale Sch. District, Calif.) **The effects of an elementary school fast-learner program on children's social relationships.** *Except. Child.*, 1959, 26, 59-63. All subjects were in grades 4 through 8 in schools in a suburban community near San Francisco. Classrooms were randomly divided by school and by grade level into two groups comparable in size, IQ distribution, number of fast learners, and classroom index of "degree of acceptance." Fast-learners were

identified on the basis of IQ scores. The 204 experimentals attended two 90-minute special classes per week, whereas the 211 controls did not. Pre- and posttest measures 4½ months apart were obtained using the Columbia Classroom Social Distance Scale, and three sociometric questions. On the whole the results suggested that the fast-learner program had a limiting effect on the number of classmates accepted as best friends, and had no effect on fast-learners' acceptance of classmates as best friends, on group cohesion, or on subgroup preference. —J. W. Fleming.

**524. HORÁČKOVÁ, MILADA, & HRUBCOVÁ, MARIE. Problém výchovy mongoloidních dětí.** (The problem of educating mongoloid children.) *Cesk. Pediat.*, 1959, 14, 1023-1030. With reference to improved preventive and therapeutic care and after the introduction of antibiotics into therapy it must be expected that more and more mongoloid children will survive to adulthood. The problem of their education and bringing up must therefore be dealt with. 211 such children were followed from one month to 14 years of age from 1952 in terms of bodily and mental development. Increased morbidity occurred only in terms of respiratory disease. In 6 years 17 died (8%). The cause of death was analysed in 12 who died in preschool period, and the majority died from respiratory infection. Half of these had a congenital cardiac defect as well. The children were investigated by a psychologist yearly. These results enabled a character subdivision of mongols, and the type of education was advised according to the degree of retardation. Of 122 children of school age 29% were rural children in special schools, 22% from Prague in special classes for educational problems in a specialised school, and 49% were judged to be incapable of learning. The majority of Prague mongols attend special classes in a special school, and after promotion a few may be further trained in some occupation. Results thus far are not satisfactory. In various closed institutions in Czechoslovakia there are 99 severe cases of mongolism from 4 years to adult age. Of those older than 12, none is capable of independent work, 84% are capable of work under supervision, and 16% are incapable of any work. It is obvious from these results that more attention must be devoted to the prevention of mongolism and to the unknown field of its aetiopathogenesis. —English Summary.

**525. JACKSON, PHILIP W., & GETZELS, JACOB W.** (Univer. of Chicago, Illinois) **Psychological health and classroom functioning: a study of dissatisfaction with school among adolescents.** *J. educ. Psychol.*, 1959, 50, 295-300. "The purpose of the investigation is to examine the differences in psychological functioning and classroom effectiveness between two groups . . . those (adolescents) who are satisfied with their recent school experiences and those who are dissatisfied." A Student Opinion Poll was administered to 531 seventh-through-twelfth grade students in a private school. The two groups consisted of those students who were one and one-half standard deviations above and below the mean score for the Student Opinion Poll, "satisfied" and "dissatisfied," a total experimental sample of 92, approximately equally divided by experimental groups and sex. "Satisfied" and "dissatisfied" boys and girls were compared on the basis of their IQ, achievement test scores, various personality tests and inventories, and teachers' ratings. The satisfied group did "better" than the dissatisfied group in all test variables. There were no significant differences between the two experimental groups in either IQ or achievement. The teachers rated the satisfied boys significantly higher than the dissatisfied boys in all three rating categories (leadership, "desirability," and studiousness); there were no significant differences in the teachers' ratings of the satisfied and dissatisfied girls. A detailed analysis of the student's Adjective Check List indicated that dissatisfied boys, ". . . seem to project the causes of their discontent upon the world around them so that adults are seen as rejecting and lacking in understanding" (Extrapunitive). "Dissatisfied girls . . . on the other hand, are more likely to be self-critical, turning blame for their dissatisfaction inward" (Intropunitive). —A. H. Roden.

**526. JONES, BETTY.** (Pacific Oaks, Pasadena, Calif.) **A study of age grouping in a summer nursery school experience.** *J. Nursery Educ.*, 1959, 14(2), 26-32. A study investigating some of the effects of wide age grouping in comparison to narrow

age grouping in nursery school is reported. The wide age group consisted of 19 children ranging in age from 2½ to 5 years, and the narrow age group included 13 children from approximately 4½ to 5½ years. "Age grouping, in short, is one of the factors contributing to the character of a nursery school group. Individual children, however, are still the decisive factor in what goes on in nursery school." —G. R. Hawkes.

**527. McVICKAR, POLLY.** (Univer. of California, Los Angeles) **The creative process in young children.** *J. Nursery Educ.*, 1959, 14(3), 11-16. This study of the process of children's creativity is based on the observation of four- and five-year-old children and their experiences in two types of creative activity—painting and drawing. Through art a child communicates with himself. Children need freedom to do nothing. Three stages of the creative process are: (1) receiving impressions, (2) gestation, and (3) drawing together impressions. —G. R. Hawkes.

**528. MORGAN, ANTONIA BELL.** (Aptitude Associates, Merrifield, Va.) **Critical factors in the academic acceleration of gifted children, a follow-up study.** *Psychol. Rep.*, 1959, 5, 649-654. Reassessment of 23 bright children five years after 12 were accelerated by one year, indicates that the accelerated equaled the non-accelerates in school achievement, surpassed them in academic distinction and social leadership, and tended to have better emotional adjustment. Findings seem to confirm the adequacy of certain criteria, previously isolated from clinical data, as predictors of successful acceleration. —Author's Summary.

**529. MOTOMI, KISHIDA.** **A study on the human relationship between pupil and teacher: II. With special emphasis on the effects of teacher's conditions upon the pupil's attitude toward them.** *Jap. J. educ. Psychol.*, 1959, 7, 67-78. This second report by the author analyzes the personality of teachers who on the basis of an earlier study were reported as well liked by their pupils. The author found that sex and age of teacher showed no relationship to pupils' attitude, but such characteristics as being devoted to pupil, being liberal in contrast to strict, and being affectionate in contrast to indifferent were related to pupil attitude. It also appeared that more qualified teachers, in contrast to those who rate themselves as unqualified, were accorded greater acceptance by their pupils. (From English Summary)—A. Grams.

**530. PEGNATO, CARL W., & BIRCH, JACK W.** (Pittsburgh Public Sch., Pa.) **Locating gifted children in junior high schools—a comparison of methods.** *Except. Child.*, 1959, 25, 300-304. A junior high school population of 1400 was screened for gifted students by seven methods: teacher judgment, honor roll listing, creative ability in art or music (teacher choices), student council membership, superiority in mathematics (teacher choices), group intelligence test (Otis), and group achievement test (Metropolitan). 781 students were thus nominated and then tested with the Stanford-Binet. When giftedness was defined as obtaining an IQ score of 136 or higher, 91 gifted children were isolated. The most effective screening procedure was a combination of the group intelligence test and group achievement test, which predicted 96.7% of the gifted students. There was also some indication that group intelligence tests help locate gifted children not showing their ability either in grades or on group achievement tests. —J. W. Fleming.

**531. PHILLIPS, E. LAKIN, & HARING, NORRIS G.** (Nat'l Orthopedic & Rehabilitation Hosp., Arlington, Va.) **Results from special techniques for teaching emotionally disturbed children.** *Except. Child.*, 1959, 26, 64-67. 32 severely emotionally disturbed children at grade levels two to five were assigned to two experimental groups of eight each, and to a single control group. Experimental subjects were assigned to a special classroom situation that emphasized order, structure, the setting of many types of limits, and assignments according to skill limits. The dependent variables were educational progress and behavioral improvement over a period of about six months. Experimentals gained significantly more than the controls on the California Achievement Test, and showed greater improvement as measured by a series of teacher ratings of behavior items. —J. W. Fleming.

**532. WEITZ, HENRY, & COLVER, ROBERT M.** (Duke Univ.) **The relationships between the educational goals and the academic performance of women, a confirmation.** *Educ. psychol. Measmt*, 1959, **19**, 373-380. Unlike men, women seem to perform academically about equally well whether or not they have educational goals clearly defined by a major field of study. This study of the women enrolled as freshmen in 1951-1953 confirmed earlier findings. —S. G. Vandenberg.

## SOCIOLOGY

**533. BERGLER, VON REINHOLD.** (Univ. Erlangen) **Die Konstanz von Sozialstereotypen in verschiedenen Lebensaltern.** (Constancy of social stereotypy at different age levels.) *Vita Humana*, 1959, **2**, 149-164. (1) The study used the Physiognomische Test (Thomae) in a modified form. The subjects had to select out of a number of portrait photos those showing representatives of the trait A as well as of the trait B. "Trait" in this connection means the psychological content of a latent value system. By standardized questions the ideas of the subjects about both types were studied. (2) The study included a sample of 5185 subjects representative of the population of Western Germany (age 16 to 70 years). (3) The results did not show any significant differences in the correlation of the test photos and the two traits within the age groups studied. Social stereotypes emerged as constant factors in the individual life course. Apparently these stereotypes are continuing forms and techniques of every day life, as soon as they were canalized or conditioned by certain experiences. (4) The results must be evaluated within the frame of reference of a developmental psychology of the adult personality. Here the phenomena of constancy and variability are of equal importance. —English Summary.

**534. BURDICK, HARRY A., VON EKARTSBERG, ROLF, & ONO, HIROSHI.** (Dartmouth Coll.) **Two experiments in social power.** *Psychol. Rep.*, 1959, **5**, 781-789. Two experiments have supported the view that the influence of a power figure was a positive function of his control of reinforcing stimuli. Further, the attempts to take over power within a group were found to be a function of the communication network of the group. —Authors' Summary.

**535. CASSEL, RUSSELL N.** (Fontana Unified Sch. Dis., Calif.), & HADDOX, GENEVIEVE. **Comparative study of leadership test scores for gifted and typical high school students.** *Psychol. Rep.*, 1959, **5**, 713-717. This study was concerned with a comparative assessment of scores from two leadership tests [The Leadership Q-Sort Test (LQT), and The Leadership Ability Test (LAT)] for a group of 100 typical ninth grade students and a comparable group of gifted ninth and eleventh grade students in the Phoenix Union High Schools and Phoenix College System. No significant difference was found between the typical and gifted students in terms of leadership values as measured by the LQT Scores ( $R_{pbis}$  was  $.180 \pm .071$ ). However, a difference was obtained that has both statistical and practical significance for decision pattern as measured by the LAT scores. Gifted students exhibited scores which more closely approximated those of demonstrated leaders. Their decision pattern emphasizes parliamentary procedure and minimizes other decision patterns (autocratic aggressive, autocratic submissive, and laissez faire). It is suggested that training programs for leadership development in our high school curriculum would help students enter adult roles in our community prepared to exhibit leadership values and patterns more comparable to those of demonstrated leaders. —Authors' Summary.

**536. ELSE, ROGER P.** (West Virginia Dept. Educ., Charleston) **The social position of hearing handicapped children in the regular grades.** *Except. Child.*, 1959, **25**, 305-309. Sociometric tests were administered to 1258 students in the third through the seventh grades. Among these were 45 hearing handicapped children (loss in excess of 35 decibels, best binaural average of the frequencies 500, 1000, and 2000 cps). Although the results indicated that the handicapped as a group were not as



well accepted and did not score as high as the average for their classmates, there was still a very wide range of acceptance of them as individuals. —J. W. Fleming.

**537. EYFERTH, VON KLAUS.** (Psychologischen Institut der Universität Hamburg) **Eine Untersuchung der Neger-Mischlingskinder in Westdeutschland.** Vita Humana, 1959, 2, 102-114. This is a preliminary report on a study of children (age 5 to 6 years) whose fathers were Negroes serving in the U. S. Army in Germany. Two main questions are to be answered by this study: (1) How is the attitude of the population towards this new minority and which are the factors influencing this attitude? (2) What is the impact of this attitude held by the majority on the development of the young members of this minority group? Methods of sampling and examination are reported and some preliminary results are discussed. —English Summary.

**538. FARBER, BERNARD.** **Family organization and crisis: maintenance of integration in families with a severely mentally retarded child.** Monogr. Soc. Res. Child Developm., 1960, 25, No. 1. 95 p. \$2.75. The aim of the research was to investigate strategies of family organization which counteract disintegrative effects of having a severely mentally retarded child. Both husband and wife in 233 families in the Chicago metropolitan area were interviewed. A model, based on the von Neumann and Morgenstern theory of games of strategy, was developed to organize the data. Families were categorized by strategy of organization as (a) child-oriented, (b) home-oriented, (c) parent-oriented, or (d) other strategies. The families were also classified on the basis of social class, early marital integration, religion, and sex and birth order of retarded child as being in favorable, unfavorable, or unpredictable circumstances regarding potential impact of the retarded child. The major findings were: (a) Marital integration in child-oriented, home-oriented, or parent-oriented families was higher than that in families classified as "other strategies." (b) Family orientation generally was more important than institutionalization of the retarded child as a factor in marital integration. (c) For those families in unfavorable circumstances, high marital integration was dependent upon both family orientation and institutionalization. (d) Frequency of interaction with the retarded child was related to personal adjustment of the normal sister. (e) Quality of interaction between normal and retarded siblings changed with age. —Author's Abstract.

**539. HARVEY, O. J.** (Univer. of Colorado, Boulder), & **RUTHERFORD, JEANNE.** **Status in the informal group: influence and influencibility at differing age levels.** Child Developm., 1960, 31, 377-385. This study focused on three questions: (a) the differential influence of the highest and lowest status member of an informal group on the opinions of other members; (b) relationship of an individual's status to his own influencibility; and (c) relationship between status and popularity at different age levels. Subjects, 405 from the third, sixth, ninth and eleventh grades, indicated their preference pre- and post-communicatively for one in the pair of critical pictures from the Meier Art Judgment Test along with preferences for non-critical pictures. In one experimental condition (HSD-LSA) Ss were informed that the highest status member in the class disagreed with their initial choice while the lowest status member had agreed. The other experimental condition (LSD-HSD) was the reverse. Control Ss indicated their preferences twice without communication. Significantly more Ss changed their preference in the HSD-LSA than in the LSD-HSA and control groups, and significantly fewer than controls changed in the LSD-HSA condition. At the third and ninth grades status of sources did not affect preference changes, but it did in favor of the high status source in the sixth and eleventh grades. Popularity did not relate to influencibility; status did. The correlation between status and popularity for the four grades ranged from .74 to .82, with no significant difference between any grades. —Authors' Abstract.

**540. HOFFMAN, MARTIN L.** (Merrill-Palmer Sch., Detroit, Mich.) **Power assertion by the parent and its impact on the child.** Child Developm., 1960, 31, 129-143. The hypotheses under test in this study were as follows: Influence techniques which assert the parent's power over the child without qualification (no ex-

planations of compensatory gratifications) clash with the child's closure and autonomy needs. Therefore, their frequent use engenders hostile, rebellious, and assertive tendencies which are displaced in more permissive situations (e.g., nursery school) toward peers and, to a lesser extent, toward adults. Working class parents use more unqualified power assertion than middle class parents. The sample included 12 middle class and 10 working class families with a 3- to 4-year-old child attending a half-day nursery school. Parental influence technique data were obtained from fathers' and mothers' descriptions of a full day's interaction with the child; child behavior data, from nursery school observations. Mothers' use of unqualified power assertion in response to child's noncompliance, but not as initial technique, related to the child variables as hypothesized. This suggests that the heightened involvement following the child's resistance to the mother's initial technique is necessary for enduring effects to occur. Alternative interpretations reversing the causal sequence were examined and found no support in the data. Fathers' use of unqualified power assertion did not relate to the child variables, although there was some evidence that fathers have an indirect effect, i.e., the fathers' power assertiveness toward his wife contributes to her power assertiveness toward the child. Working class parents used more unqualified power assertion than middle class parents, differences being most pronounced for fathers. —Author's Abstract.

**541. JARECKY, ROY K.** (Univer. of New York, Syracuse) **Identification of the socially gifted.** Except. Child., 1959, **25**, 415-419. Seven instruments, such as sociometrics, ratings, social and mental maturity scales, were used to evaluate social giftedness in 76 adolescents 13 to 15 years of age. Intercorrelations indicated the greatest agreement was among instruments whose scores reflected overt behavior in interpersonal relationships. Previously obtained anecdotal records of the three highest and lowest ranking students revealed differences consistent with expectations. —J. W. Fleming.

**542. JENKINS, WESLEY W.** **An experimental study of the relationship of legitimate and illegitimate birth status to school and personal and social adjustments of Negro children.** Amer. J. Sociol., 1958, **64**, 169-173. Adjustment was considered to be measured by the intelligence quotient, age-grade placement, school absences, academic grades, teacher's rating, and the personal and social adjustment scores on the California Test of Personality. The subjects were 43 Negro children of approximately the same socioeconomic level, with school placements ranging from the fourth to the twelfth grade, 22 legitimate and 21 illegitimate. It was found that the legitimate children rated higher in every area except school absences; these differences were statistically significant, however, only for teacher's rating and IQ-age correlation. In addition, the older illegitimate children rated consistently poorer than the younger; this suggests that, as these children grow older and realize more fully the social stigma attached to illegitimacy, their adjustment becomes more adversely affected. It appears also that illegitimacy is not regarded as the normal and accepted birth status in the Negro subculture, as some have believed. —W. J. Smith.

**543. KELL, LEONE, & ALDOUS, JOAN.** (Kansas State Univer., Manhattan) **The relation between mothers' child-rearing ideologies and their children's perceptions of maternal control.** Child Developm., 1960, **31**, 145-156. Previous studies have largely failed to find clear-cut relationships between specific child-rearing practices and aspects of children's later personalities. One viewpoint expressed is that practices are likely to be significant as expressions of attitudes rather than through their own effects. The assumption of this study was that mothers holding different child-rearing ideologies would use different methods for socialization with resultant differences in their children's perceptions of their mothers' control. Specifically, the hypothesis tested was that mothers holding the traditional middle class child-rearing ideology would have children who, as young adults, would perceive their mothers as having overcircumscribed their freedom during their developmental years. For the group of 50 mothers and their 50 college-age children interviewed, the hypothesis was upheld for girls but not for boys. Speculative interpretation suggested that mothers may

have tempered their control over boys in order to foster enough aggressiveness in them for class mobility and for advancement in the occupational world. 44 of the mothers had a majority of traditional values which raises the question as to whether the developmental child-rearing ideology has been as widely accepted by middle class mothers as has been commonly supposed. —Authors' Abstract.

544. KODMAN, FRANK, Jr., SPIES, CARL, STOCKDELL, KENNETH, & SEDLACEK, GORDON. (Univer. of Kentucky) *Socioeconomic status and observer identification of hearing loss in school children*. *Except. Child.*, 1959, 26, 176-179, 188. Parent, teacher, and audiometric identification of hearing loss were compared using 716 elementary school children in grades two through six. Two socioeconomic populations were sampled. Parents and teachers were significantly inferior in identifying children with mild-to-severe hearing losses and those with normal hearing. Socioeconomic status was not found to be a significant variable. —From Authors' Summary.

545. KOHN, MELVIN L. *Social class and parental values*. *Amer. J. Sociol.*, 1959, 64, 337-351. 174 middle class and 165 working class parents, having 10- or 11-year-old children, residing in Washington, D.C., were interviewed regarding the values they would most like to see embodied in their children's behavior. A broadly common, but not identical, set of characteristics was found to be highly valued by mothers of both social classes for children of this age; these included honesty, consideration for others, obedience to parents, dependability, good manners, and self-control. Less value was placed on seriousness, ability to play by oneself, being liked by adults, affectionate responsiveness, ability to defend oneself, or ambition. Significantly more emphasis was put by middle class mothers on happiness, consideration, self-control, and curiosity, whereas working class mothers regarded obedience, neatness, and cleanliness as more desirable. Fathers' values were found to be similar to those of the mothers except that the fathers were not so likely to put high value on happiness for their daughters and that middle class fathers put greater emphasis on dependability whereas working class fathers tended to regard obedience and ability to defend oneself as more highly desirable. Further analysis of the data yielded the interpretation that, for both social classes, values the attainment of which seem to present problems are given priority over those which seem less problematic. For working class parents the important but problematic values are interpreted as centering around qualities which assure respectability, but for middle class parents as centering around internalized standards of conduct. —W. J. Smith.

546. KOWAL, CZESŁAW. *O poglądach społeczno-moralnych młodzieży licealnej*. (About the social and moral opinions of graduates of secondary schools.) *Psychol. Wychowawcza*, 1959, 2, 34-50. The author . . . presents the results of polls regarding the opinions of graduates of two secondary schools (83 people) on the subject of certain social and moral problems. The purpose of the poll was to find out whether opinions—voiced during the last years in the Polish daily press and in periodicals to the effect that contemporary youth is demoralized, without any ideals, indifferent towards social matters and deprived of any valuable ambitions—are correct. The author of the article gave the above mentioned accusations the form of general statements, expressing a negative attitude towards a number of moral and social values and submitted them to the graduates of secondary schools, asking them to present arguments justifying their correctness or incorrectness. These statements were as follows: "In our times it is not worth while to try to be decent and honest." "A man lives to enjoy life and not in order to live a sensible life and to accomplish something useful." "In no circumstances and for nothing is it worth while to risk one's life." "It is no use to be interested in politics." "It is no use to be concerned about matters, that keenly interest society." "Socialism is a less perfect social and political system than capitalism." The overwhelming majority of those investigated rejected the life principles suggested by these statements, supplying convincing arguments for their attitude of a moral and social nature. . . . From an analysis of the material it results that a negative attitude to the above mentioned statements was

voiced by a considerably larger percentage of girls than boys and by a relatively larger percentage of youth of worker and peasant origin than of those from the intelligentsia. . . . —From English Summary.

**547. LARSEN, OTTO N., & HILL, RICHARD J.** *Social structure and interpersonal communication.* Amer. J. Sociol., 1958, **63**, 497-505. An exploratory analysis was made of the relationship between changes in the structure of group relationships and the communication of a message. Subjects were two groups of boys  $N_s = 43$  and 60), 12 to 15 years of age, at a summer camp. By means of a sociometric questionnaire, administered one day after arrival, message-starters were selected who were either sociometric stars, or isolates, or in a median position. It was concluded that communication is more likely to take place among individuals who are sociometrically linked than among those who are not, and also that the more stable the social structure of a community the greater is its influence on interpersonal communication among members of that community. —W. J. Smith.

**548. MILTON, G. A.** (Univer. of Colorado) *Sex differences in problem solving as a function of role appropriateness; of the problem content.* Psychol. Rep., 1959, **5**, 705-708. 24 undergraduate men and 24 undergraduate women were given a set of 20 problems, half with content appropriate to the masculine role and half with content appropriate to the feminine role. The results confirm the prediction that when the characteristics of problems are altered so as to make them less appropriate to the masculine role, sex differences in problem solving are reduced. —Author's Summary.

**549. ORSHANSKY, MOLLIE.** (Social Security Admin., Washington, D.C.) *Income of young survivors, December 1958.* Social Security Bull., 1959, **22**(9), 10-15, 24. At the end of 1958, there were 2.9 million orphans in this country, about 4.5% of the total population under 18. Of the paternal orphans, 1.3 million, or 63% were receiving old-age, survivors, and disability insurance benefits in December 1958. Every seventh child on these rolls was also receiving benefits under a Veterans Administration program, and an additional 11% were receiving public assistance under the program of aid to dependent children. About 825,000 of the paternal orphans were supported at least in part by their own earnings or those of their widowed mother; it was more common for the mother to work. At the end of 1958, excluding widows who had remarried, there were an estimated 710,000 widows under age 65 with one or more children under 18 in their care. Median money income reported for widow-child beneficiary groups (OASDI) was \$2,830. One-fifth had less than \$1,800 to live on and only one-tenth had as much as \$5,000. For 9% of these family groups, the benefits were their only cash income for the year, and an additional 11% had no more than \$300 in addition to their benefits. —I. Altman.

**550. STEWART, LAWRENCE H.** (Univer. of California, Berkeley) *"Occupational level" scale of children's interests.* Educ. psychol. Measmt, 1959, **19**, 401-409. An interest scale capable of differentiating children of varying socioeconomic backgrounds has been developed using two criterion groups of fifth grade boys consisting of 107 sons of semiskilled and unskilled workmen and 115 sons of business and professional men. Cross validation of 243 fifth grade boys led to an odd-even reliability of .776 and satisfactory validity as shown by different means for 6 occupational levels based on the Roe Occupational Scale. —S. G. Vandenberg.

**551. TRIPPE, MATTHEW J., McCAFFREY, I., DEMPSEY, P., & DOWNING, JOSEPH J.** (New York Dept. Mental Hygiene, Syracuse) *The school-excluded mentally retarded child.* Amer. J. ment. Def., 1959, **63**, 1005-1009. Psychological evaluations and parent interviews were conducted for 83 children of school age in Onondaga County who were not enrolled in a regular school as of March 1, 1953. The interviews and examinations were made two years later when the children had reached ages ranging from 8 to 18. Mental retardation was a common characteristic of the children, and a large proportion also presented multiple problems, such as speech defects, blindness, epilepsy, secondary emotional problems, etc. Some form of social

experiences outside the home, appropriate self-care training, occupational and vocational instruction and limited academic training seemed to be indicated for three out of four of the total number of children examined. In general, the statements of the parents indicated they preferred to provide for their children at home as long as possible. The findings suggest that some provision for individual family assistance may constitute a real need at the community level. —From Authors' Summary.

**552. TUMA, ELIAS, & LIVSON, NORMAN.** (Univer. of California, Berkeley) **Family socioeconomic status and adolescent attitudes to authority.** *Child Developm.*, 1960, **31**, 387-399. Attitudes to authority, ranging from conformity to rebelliousness were evaluated in three interpersonal situations (at home, in school, and with peers) for the same sample of adolescent boys and girls at ages 14, 15, and 16 years. The inferential ratings, based on interviews with the subjects and their parents and on data provided by teachers and classmates, were analyzed for sex differences (a slight tendency toward greater acceptance of authority in girls), for generality among the three ratings at a given age (moderately positive intercorrelations), and for stability of a given attitude over the three age levels (considerable fluctuation). Most striking is the consistently negative relationship between degree of conformity experienced by the male adolescent (in all situations and all ages) and the socioeconomic status of his family (measured separately by a composite index, by the Berkeley Social Rating Scale, and by mothers' and fathers' educational levels). No consistent trend is apparent for girls. Mothers' education is the single, most powerful predictor of boys' attitudes to authority, yielding significant negative correlations in 8 of 9 instances. There is a suggestion, for both sexes, of variation in degree of conformity relatable to an interaction between socioeconomic factors and the physical maturity level of the adolescent. The results are evaluated in the context of reported social class differences in parental values and practices and their corresponding socialization goals. —Authors' Abstract.

**553. WILSON, ALAN B.** (Univer. of California, Berkeley) **Residential segregation of social classes and aspirations of high school boys.** *Amer. sociol. Rev.*, 1959, **24**, 836-845. School districting tends to segregate youths of different social strata. Consequently school populations have modally different values and aspirations. The hypothesis that the bulk of the students in a high school provide a significant normative reference influencing the values of individuals within the school is investigated by comparing the educational aspirations of boys who attend schools characterized by different climates of aspiration. Differences in the "contextual variable"—attributes of the membership group—are shown to affect aspirations when relevant "personal variables"—attributes of reference persons—are controlled. The ethos of the school seems also to affect academic achievement, occupational aspirations, and political preferences. —Author's Abstract.

**554. WOODS, PAUL J., GLAVIN, KATHLEEN B., & KETTLE, CAROLINE M.** (Hollins Coll., Virginia) **A mother-daughter comparison on selected aspects of child rearing in a high socioeconomic group.** *Child Developm.*, 1960, **31**, 121-128. Purposes: (a) to investigate the relationships between how a young woman intends to raise her children and how she herself was raised, and (b) to compare the reported child-rearing practices of one generation with the professed intentions of the succeeding generation in a rather high socioeconomic class. Questions dealing with sucking and feeding, toilet training, dependency, aggression, sex and modesty, bedtime restrictions, and manners were answered by 135 daughters and 86 of their mothers. The only significant correlation between mothers and daughters was on an item dealing with punishment for disobedience. A number of significant differences were found between the two generations, however. The daughters were both more indulgent initially and less severe in the socialization process in sucking and feeding and toilet training. There was little difference in the area of dependency behavior. Both groups were intolerant of aggression. The daughters were somewhat less concerned with modesty and were more permissive towards mild sex play, but they intended to punish genital touching more often. Both were fairly strict about bedtime. The



daughters would start teaching manners later, but they were more concerned with correcting a breach of manners. —Authors' Abstract.

**555. WOODS, SISTER FRANCES J., & CARROW, SISTER MARY A.** (Our Lady of the Lake Coll., San Antonio, Texas) **The choice-rejection status of speech-defective children.** *Except. Child.*, 1959, **25**, 279-283. A study of the social acceptance of speech-defective children was made by comparing the choice-rejection scores of 96 speech-defective children with their 1428 peers in grades 2, 3, 4, and 5. The speech defectives were found to have choice-rejection scores significantly lower than the non-speech defective on the criteria of play and friendship, but not on that of work. Within the speech defective group there were no significant differences between the sexes, or degrees of severity of problem. Stutterers were found to be significantly better accepted than articulatory defectives. —From Authors' Summary.

**556. ZUK, G. H.** (St. Christopher's Hosp. for Children, Philadelphia, Pa.) **The religious factor and the role of guilt in parental acceptance of the retarded child.** *Amer. J. ment. Def.*, 1959, **64**, 139-147. Subjective impressions of parental acceptance were made by a social worker on the basis of an initial interview. The relationship of acceptance to other objective factors, such as sex, age, and IQ of the child, father's occupation, religion, was determined by the chi square technique. The most significant findings were that Catholic mothers were more accepting than non-Catholic mothers, and that younger (three years and under) children tended to be more accepted. Aspects of guilt and their speculated relationship to the adjustment of the retarded child are discussed. —J. W. Fleming.

### Book Notices

**557. EHRMANN, WINSTON. Premarital Dating Behavior.** New York: Holt, 1959. xvii+316 p. \$6.00. Margaret Mead points out that, while Latin once was the acceptable language for discussion of the physical side of intense and personal love, today it has been replaced by the idiom of tables, percentages, and variables. As a calculated antidote to the toxic vernacular of statistics, Ehrmann has generously injected the comments and written statements of his subjects into the text. These excerpts from the protocols will hold a fascination even for scientists. The purposes of the book are to describe the sex aspects of dating behavior in terms of varying degrees of physical love-making intimacies, to measure aspects of the individual's control of this behavior, to analyze the behavior patterns in terms of specific characteristics of the individuals, and to examine some of the relationships among ideas of love, sex codes of conduct, and heterosexual behavior. Using written schedules of questions, data were collected on over 1000 male and female college students. Further factual accounts were gathered by personal interviews from 100 of these subjects. About one-third of the book (Chapter V—Intimacy Relationships and Sex Codes of Conduct, Chapter VI—Attitudes about the Control of Heterosexual Behavior) is devoted to an interpretation of the interview material while the remainder is an analysis of the data from the written schedule. The subjects were single students not previously married who were enrolled in the course Marriage and the Family; all the data for the research came only from those persons who were specifically selected as subjects for this purpose. It is, essentially, a white, middle class, Protestant sample. Throughout the account of his findings Ehrmann makes comparisons with the results obtained by other researchers when their area of inquiry coincides with his own. The conceptual framework of this study differs from that of past work by stressing the classification of heterosexual intimacy into categories on a continuum ranging from kissing



to complete coitus and noncoital genital behavior. At the conclusion of the book, Clifford Kirkpatrick of Indiana University has written an epilogue addressed to the scientific question "So what?" He not only assesses the distinctive contributions of the work but makes some incisive comparisons between this research and the monumental studies of Kinsey. This book is indeed a labor of love in the Kinsey tradition and it contributes significantly to legitimizing sex as a topic of scientific concern. The research has its greatest impact in delineating the fundamentally illogical problem our society has posed for its young people to solve. —E. B. McNeil.

**558. FARNSWORTH, P. R., & McNEMAR, Q. (Eds.) *Annual Review of Psychology*. Vol. 10. Palo Alto, Calif.: Annual Reviews, 1959. ix+520 p. \$7.00.** George S. Thompson begins his review of developmental psychology in this issue of the "Review" with the statement "... there has been a gross neglect of developmental variables in current behavior theory." With this introductory statement, Thompson then devotes the greater part of his review to relating the current research findings in developmental psychology to (1) the learning process, (2) sensorimotor, perceptual, and cognitive functions, (3) interests, attitudes and abilities, (4) personality organization and functioning, (5) social behavior and (6) cultural conditions related to growth. Additionally, brief sections of the review are devoted to new research methods and impressions of the writer himself of child psychology as a discipline. Of the latter, Thompson believes the field has matured considerably as evidenced by the greater respect for empirical findings as opposed to what he calls the intuitive theorizing of a few years back. Thompson also makes a plea for more comparative research and for more of a revival of the co-twin method as a technique for controlling genetic factors. Finally, he predicts that the value of psychoanalytic theory to the developmentalist is becoming more limited as a result of what he labels inadequate supporting evidence. In his chapter on educational psychology, J. M. Stephens has reviewed several areas of interest to the student of child development. Included are (1) studies on academic and intellectual growth in childhood (the "57th Yearbook of the National Society for the Study of Education" is reviewed by Professor Stephens, with some attention being given to recent studies on creativity in childhood), (2) character, interest, and personal adjustment, (3) interrelations between physique, intellect, and adjustment, and (4) the role of nonscholastic factors on school performance. The two sections Child Development and Educational Psychology of the 1959 volume of the "Annual Review of Psychology" are very good summaries of research in these two fields. Thompson is particularly thorough in his coverage. Stephens omits much work that has been done in the general areas of academic or scholastic under- and over-achievement. —G. Terrell.

**559. FROSCH, JOHN, & ROSS, NATHANIEL. (Eds.) *The Annual Survey of Psychoanalysis*, Vol. V. New York: International Universities Press, 1959. xvi+608 p. \$12.00.** This is volume five of the series appearing yearly and summarizing the psychoanalytic literature. The volume, covering 1954, is divided into sections dealing with historical studies of psychoanalysis, critique of psychoanalysis, theoretical, clinical and dream studies. There is an excellent section on psychoanalytic therapy. Included are chapters on psychoanalytic training and also the fields of applied psychoanalysis. The tenth chapter reviews books on psychoanalysis that seem to be of major significance. The bibliography numbers 263 references. There is an index which rather thoroughly covers both topics and authors. This book can be used as a source book for the literature of psychoanalysis in the above area for 1954. —I. A. Kraft.

**560. GARRISON, KARL C., & FORCE, DEWEY G., Jr. *The Psychology of Exceptional Children*. (3rd Ed.) New York: Ronald Press, 1959. 592 p. \$6.00.** This book is designed as a textbook for teachers-in-training and teachers-in-service. It aims to give the classroom teacher an overview of the nature, incidence, identification, and education of children who deviate sufficiently from the average to require special education. The third edition includes in its discussion the significant developments in special education which have taken place since the previous editions were

published. These developments involve greatly expanded services, increased public awareness, and a refinement in methods of dealing with exceptional children. New chapters on epilepsy, cerebral palsy, and cardiac conditions have been added and sections on emotionally and socially maladjusted children have been brought up-to-date. One of the strong points of the book is the authors' awareness of the importance of how the exceptional child feels about himself and how he reacts to the responses of others towards him. Emphasis is placed on viewing the child as a whole rather than a multiplicity of parts or as a child with a specific handicap. The book seems admirably written in the light of its stated purpose. —S. R. Laycock.

**561. GOODLAD, JOHN I., & ANDERSON, ROBERT H. *The Non-Graded Elementary School*.** New York: Harcourt, Brace, 1959. vii+248 p. \$4.95. The authors present evidence that children enter the first grade with a range of from three to four years in their intellectual readiness to learn and that this spread increases to approximately double that amount by the time the children approach the end of the elementary school. The achievement range among pupils begins to approximate the range in intellectual readiness to learn soon after children enter the first grade. In addition, individual children's achievement patterns differ markedly from one learning area to another. In view of the above, the authors feel that grade-labels have no meaning and are frustrating to teachers and damaging to pupils. They consider that the grade-system regards a curriculum as so much material to be learned or topics to be covered at each grade-level. This shifts from developmental long-term learning to an ineffective stop-and-go kind of learning. The authors recommend the non-graded school in which a longitudinal view considers learning as consisting of a set of threads running vertically through the curriculum and around which learning activities are organized. In such a school each child travels at his own pace and grows in concepts and skills which are part of a long-range plan for his development. The authors describe various methods of grouping pupils in the non-graded school through reading achievement, age, social relationships, interest, and work and study habits. However, they regard curricular differentiation as the basic characteristic of non-grading. Problems encountered in changing to a non-graded system of organization are discussed and the dangers in doing so pointed out. The book is well-written and should be of interest to all teachers. —S. R. Laycock.

**562. GRONLUND, NORMAN E. *Sociometry in the Classroom*.** New York: Harper, 1959. 340 p. \$4.50. This book represents a comprehensive integration and interpretation of the research literature related to sociometry and its meaning for education. The material is well organized and the author has a clear manner of presentation. It is obvious that a great amount of research in regard to sociometrics has been compiled in this one book. After reading this book one should be well equipped to use sociometrics in the classroom or administratively. There is enough detail in certain chapters to carry the beginner through all the necessary steps of constructing and interpreting the results. Gronlund presents certain qualifications concerning the use of sociometrics. He points out that every group member should be familiar with the choice situations and free to participate in them. Also, group members should have sufficient opportunity to become acquainted with each other before the sociometric test is administered. Gronlund feels the purposes for which the sociometric test is especially useful in a school setting include: (1) improving the social adjustment of individual pupils, (2) improving the social structure of the group, and (3) improving the social structure and the social adjustment of individuals. The limitations of the sociometric test are not neglected. This area presents some sound warnings to those who might draw implications beyond the data available from a sociometric study. Gronlund points out that research studies indicate that five choices provide the most stable sociometric results during the later elementary school years. Gronlund feels individual interviews are necessary in testing pupils below the fourth grade level. However, at no point in the book does he document the reason why he feels the group technique of acquiring data is not efficient during the first four grades. Research by Jennings indicates that an interval of seven to eight

weeks between tests is long enough to make the choices realistic and short enough to keep up with the changes in group structure. A considerable amount of space is devoted to the methodology of tabulating sociometric data. Common errors in interpreting the sociogram are included. The method of recording sociometric data for longitudinal study, based on Northway's work, is included. In summary Gronlund has presented a handy reference to the research in the sociometric field. The reader is equipped to apply sociometric results to educational problems by a thorough study of the book. —D. Dinkmeyer.

**563. MAAS, HENRY S., & ENGLER, RICHARD E., Jr. *Children in Need of Parents*.** New York: Columbia Univer. Press, 1959. xvi+462 p. \$7.50. The reader will find this book highly interesting as he is taken from small rural community to large city, to widely separated areas of this vast country, to hear the opinions of social workers, judges, clergymen; to see the children, their parents, their foster parents; to see the varying pattern of welfare services attempting to cope with a problem so varied, yet basically always the same. The researchers have gone into nine American communities of varying size and complexion, where the nature of the problems arising from failure of own parents to provide the child with a home reflects community attitudes, standards, and policy. The researchers sought facts in answer to their crucial questions: Who are these children in need of parents? How did they come into care? Where were they placed? How often were they moved about? Were psychological and other problems prevalent among them? What are their chances of gaining a permanent home? Besides interviewing the persons involved either directly or as key community figures, the researchers studied the welfare agencies, the legal systems, and ethnic, cultural, religious, and socioeconomic factors influencing attitudes and action in the various communities. The study was conducted —after what must have been long and careful planning—systematically, so that the data would be truly significant and comparable to that obtained in the other communities. The general pattern of investigation is made up of the following components: child placement and other social processes, the legal system, the agency networks, the children and their parents. A chapter is devoted to a discussion of children likely to grow up in foster care and to the parents who adopted the children. In a concluding chapter, Joseph H. Reid analyzes the findings and with the facts in hand points out the areas in which he believes prompt action, revision of current policy, or further study may be needed. Reid believes that, in some cases, existing situations will have to be altered radically to meet the needs of the estimated quarter million American "orphans of the living," as he calls these unfortunate children handicapped by lack of love and a family. This fact-finding study sheds considerable light on the extent and varying aspects of the problem, on the diverse obstacles that stand between the child and a permanent home. More than for the facts that the study has unearthed, this carefully planned, diligently conducted, orderly investigation is valuable as a blueprint for other similar studies in other communities. But these interesting, informative studies will be sterile unless they are followed up by appropriate action. —J. H. Di Leo.

**564. MINTZ, BEATRICE (Ed.) *Environmental Influence on Prenatal Development*.** Chicago: Univer. of Chicago Press, 1958. 87 p. \$3.00. This volume is one of 10 in which the proceedings of a series of symposia on Developmental Biology, held in 1956 under the auspices of the National Research Council, are reported. It contains the edited discussions, given in reported form, between some 20 experts on the experimental alteration of morphogenesis, on teratogenic agents, extragenic factors affecting development, the interaction between the early embryo and its environment, the actions of metabolic inhibitors in morphogenesis and developmental interactions in time and in space. There are some 120 references cited. The increasing relative importance in medicine of congenital defects is emphasized, and the concept of the critical period in development for application of a particular teratogenic agent discussed. Different results are obtained, for example, by giving large doses of Vitamin A to pregnant rats at 8 days (50% anencephaly, 20% cleft palate) and at 11 days

(0% anencephaly, 90% cleft palate). Langman reports electrophoretic analyses of human maternal serum during pregnancy, which show that a considerable percentage of individuals apparently healthy but with a history of habitual abortion had abnormal spectra, particularly in the  $\alpha_2\beta$  globulin region. Waddington discusses how the application of an environmental stimulus may cause abnormalities in some individuals and not others; if new lines are selectively bred from successive generations of susceptible and nonsusceptible individuals, the anomalous character may appear spontaneously in the susceptible stock. Thus the environmental alteration has revealed previously hidden genetic potentiality, and a character at first acquired has by selecting for it been transformed into an inherited one. Beatty describes the so-called enhancement effect in rabbits in which two varieties of fetus are simultaneously gestated through artificial insemination with sperm from two varieties of male. If the average birth weight of one variety is 3 gm. greater than that of the other, the difference is enhanced when both varieties develop in the same mother; the larger variety gets larger and the small variety smaller. Sawin describes differences in general size and in more local regions of the skeleton in different inbred rabbit strains and the way in which these partly come about through differential growth rates in fetal life. Finally Weiss sums up the discussions by saying how many complex processes must interact to produce normal development; in such a system the action of any external agent will be bound to vary from individual to individual. The stabilizing mechanisms of the organisms keep the total course of development normally within a certain range, but this is wide and often no sharp division between normal and teratologic processes exists; teratogenic effects should be regarded as a shifting of the normal towards an extreme where a nonviable or nonreproducing individual results. —J. M. Tanner.

**565. OSTROVSKY, EVERETT S. *Father to the Child*.** York York: Putnam's, 1959. xviii+173 p. \$3.75. This case book recounts the experiences of a male teacher with eight children of about five years of age, falling into two large classes: children of "part-time" fathers and children in fatherless homes. The thesis of the book, covered in a too short and sketchy pair of chapters, is that an industrial society takes the father from the family for long hours without providing his children with a true grasp of the father's work-role. Thus, the sex-model to be provided by the father for both boys and girls is not as adequately presented as is the mother's role. The male-female imbalance in the young child's life is usually perpetuated in school. Yet the author's experiences as a male teacher of young children suggest that father-deprived children make use of such males to work out problems related to their own fathers. The case descriptions are interesting, but too short to describe adequately what must be a complex relationship between a disturbed child and a teacher. At times, the accomplishment of the kind, permissive author seems magical. The last three chapters are too short and general to give much guidance, yet the author appears to have a great deal to communicate on a very important subject. The author suggests a dual approach to the problem: (1) "additional male influence should be provided within the family circle when the situation warrants," and (2) "various social institutions should make a serious effort to supply male influence for the child outside the family circle." The latter suggestion can be implemented by the inclusion of men as well as women on nursery school staffs. The book is highly recommended by Piaget as a "set of personal observations finely analysed," showing "keen pedagogical feeling." —Z. Luria.

**566. PASAMANICK, BENJAMIN (Ed.) *Epidemiology of Mental Disorder*.** Washington, D.C.: Amer. Ass. Advancement Sci., 1959. x+295 p. \$6.50. This book is a compilation of papers presented at a symposium in 1956 of the American Psychiatric Association to commemorate the centennial of the birth of Emil Kraepelin. Various disciplines are represented and the scope of the symposium can be ascertained through the listing of the authors and the titles of their papers: E. Kahn, "Emil Kraepelin memorial lecture"; J. A. Clausen and M. L. Kohn, "Relation of schizophrenia to the social structure of a small city"; C. G. Wiehl, K. Berry, and W. T. Tomkins, "Complications of pregnancy among prenatal patients reporting previous

nervous illness"; J. Zubin, E. I. Burdock, S. Sutton, and F. Cheek, "Epidemiological aspects of prognosis in mental illness"; D. M. Wilner and R. P. Walkley, "Housing environment and mental health"; L. Srole and T. Langner, "Treated and untreated mental disorder in the metropolis"; B. Pasamanick, D. W. Roberts, P. W. Lemkau, and D. B. Krueger, "A survey of mental disease in an urban population: prevalence by race and income"; A. M. Macmillan, "A survey technique for estimating the prevalence of psychoneurotic and related types of disorders in communities"; J. D. Rainer and F. J. Kallman, "Genetic and demographic aspects of disordered behavior patterns in a deaf population"; J. Downing, I. McCaffrey, and E. Rogot, "An investigation of seasonal variations of mental hospitalization for old-age psychoses"; A. R. Mangus and E. Z. Dager, "Factors related to personality change during the second decade in the lives of young people"; H. Knobloch and B. Pasamanick, "Distribution of intellectual potential in an infant population." Only the last two papers in this listing are directly relevant to the area of child development. Mangus and Dager gave 384 third graders the California Test of Personality and retested them nine years later with the same test. From the total group, 30 were selected who showed the "greatest advance toward mental health" and 30 who showed the greatest "regression" in the opposite direction as derived from test-retest scores. Factors found to be significantly related to test measured personality changes were place of residence, mobility, occupation of the child's father, broken homes, and degree of participation in community projects. A severe criticism of these findings was made by the discussant E. M. Gruenberg regarding the use of the California Test of Personality as the main criterion measure and the authors' method of analysis. In the study of Knobloch and Pasamanick, 992 34- to 69-week-old infants were tested using the Gesell and a clinical physical examination with a general developmental quotient being derived from the two. One of the main findings was that the resulting distribution of scores showed significantly less variability than that of IQ distributions presented for older children on the Binet. From their study the authors conclude, "While man's fundamental structure and consequently his basic functioning is genetically determined, it is his socio-cultural milieu affecting biological and psychological variables which modifies his behavior and, in the absence of organic brain damage, makes one individual significantly different from the next." —A. J. Hafner.

**567. PULVER, URS. *Spannungen und Störungen im Verhalten des Säuglings.*** (Attention and Irritation in the Behavior of Infants.) Bern & Stuttgart: Hans Huber, 1959. 123 p. Fr./DM 12.-. (New York: Intercontinental Medical Book Corp.) As indicated in the subtitle, "observations concerning the effect of stress situations during the first year of life," this is an observational, longitudinal study, utilizing movie film analyses of the behavior of 26 infants filmed at home in standardized situations. The movie camera, which originally was only a tool used to collect the data, unintentionally became a most valuable test situation. The camera, its sound, etc., produced various degrees of irritation in the children; the degree of irritation shown by individual children remained fairly constant at different age levels and was significantly correlated with irritation produced in other test situations. The standardized situations involved the child's reactions to (a) objects dangling before his eyes at age levels 3, 4, and 7 months, (b) the movie camera at 4, 7, 9, and 11 months, (c) play with toys at ages of 9 and 11 months, (d) frustration at 11 months, (e) the mother at 4 and 7 months. The infant's reaction to each of these objects and situations are analyzed along the dimension attention-irritation. For example, the classification of children's responses to the object involves such operationally defined categories as: no attention, limited attention, happy reaction, average reaction, irritated and disturbed reaction. Correlational analysis of reactions at different age levels toward the same object and toward different objects gives empirical support for the author's conclusion: "'Irritability' is a consistent personality trait observable and measurable in different experimental situations during infancy (even as early as 4 months) which remains roughly constant during the first year of life." The study integrates general theoretical considerations as well as appropriate references to related research studies. —R. E. Muuss.



**568. SUCHMAN, J. RICHARD. *Observation and Analysis in Child Development: A Laboratory Manual*. New York: Harcourt, Brace, 1959. viii+276 p. \$2.95.**

This is a laboratory manual designed for use in an introductory course in child development. Its contents parallel closely Martin and Stendler's "Child Behavior and Development" but the author includes a chart listing the exercises in the manual that correspond quite closely to chapters in five other selected texts in the field. That the author believes that any student of child development must have direct experience with children is clearly demonstrated in the variety of exercises which can be assigned to students. From his preface we learn that "nine of the 61 exercises require direct observation of children in classrooms. But . . . other exercises lead the observer to supermarkets, theaters, playgrounds, and PTA meetings. In two exercises, the student is asked to prepare a questionnaire to sample some of the attitudes and understandings of his contemporaries. Four exercises are based on interviews, and two others call for the analysis of elementary textbook content." There are enough exercises included, more than any instructor would use in a single course, so that one can choose rather carefully the particular assignment best suited to student or class need. Suchman includes frequent and pertinent reference to research, as well as quantitative data, on growth and development, anecdotal and case history material. The author has achieved rather notable balance in the kinds of exercises provided, and, in the opinion of this writer, has fulfilled his purposes quite satisfactorily. These he expresses early in the manual and might be paraphrased as follows: (1) to help a student grasp the somewhat theoretical though basic assumptions in the study of child development as a result of direct contact with children, and (2) to acquaint the student sufficiently with methods of child study that he can read the research literature intelligently and make some actual contributions on his own. The manual has paper covers and is 276 pages in length. The format is  $8\frac{1}{2}$  by 11 inches, and the pages are perforated near the binding for easy removal so that assignments can be turned in for evaluation. —A. Grams.

**569. WEAVER, ANTHONY. *They Steal for Love*. New York: International Universities Press, 1959. 132 p. \$4.00.** The author was warden (superintendent) of an English residential treatment home for court-committed children from the time of its inception to its premature demise four years later. He describes the nature and operation of this home and the children whom it served in an informal lay-oriented tone, addressing his writing to "the prospective teacher." The author emphasizes the intangible rewards and satisfactions of work in a residential treatment setting and documents this with letters from former staff members. At the same time, he frankly describes the trying conditions under which he and his staff had to labor primarily because of narrowly-conceived trust terms under which the home had been established. Group activities, school work, and psychiatric contacts of the children are discussed and illustrated with 17 concise but lucid case histories. On the basis of the follow-up evaluation, the author reports that 70% of the children showed a "general trend of improvement," and he believes that the rate of improvement would have been more marked had the children been able to remain in a residential setting for a longer time. The book concludes with a discussion of basic needs of child development—love, companionship, and expression—and emphasizes that as long as parental attitudes and social conditions remain unchanged the progress children make in a treatment milieu is of little avail. While the research-oriented reader would wish for a more detailed presentation of the material from the follow-up study, the audience for which this book is intended, including prospective child care workers and others interested in the operation of a residential treatment home, should find it an enlightening introduction to a form of treatment for which there are all too few facilities. —A. O. Ross.

**570. WINNICOTT, D. W. *Collected Papers*. New York: Basic Books, 1958. x+250 p. \$6.50.** This book collects together certain of Winnicott's contributions over the past 25 years (1931-1956). The papers are divided into three groups. The first group consisting of two papers, one each on A Note on Normality and Anxiety, and on Fidgetiness, were written before the author was trained in psychoanalysis. The



second group of papers, on Appetite and Emotional Disorders, The Observation of Infants in a Set Situation, Child Department Consultation, Ocular Psychoneuroses of Childhood, Reparation in Respect of Mother's Organized Defense against Depression, Anxiety Associated with Insecurity, Symptom Tolerance in Paediatrics, and a Case Managed at Home, were written after he had training in psychoanalysis. These two groups of papers could well be read by pediatricians for the light they throw on some common problems met in everyday practice. The third group of papers are representative of the author's concern, particularly with the first year of life, about current psychoanalytic theory and practice. His interest focuses on the real world in its adaptation to the infant's body and mind, and how this leads the growing organism to adapt to the real world. His concern, too, is not primarily with the neurotic child or adult, but with those who without therapy never attain normalcy and therefore live outside the world of interpersonal relations. Such individuals develop a false self, the end result of the rudimentary true self having been blocked and fragmented by traumatic failures of mothering at the very beginning of life—the first year! Winnicott early came under the influence of Melanie Klein, but certainly his more recent formulations are his own. His concepts would require modification of Freud's id-ego-super-ego theory. The papers comprising the third group will be interesting chiefly to psychoanalysts. —H. C. Schumacher.

**571. ZIETZ, DOROTHY. *Child Welfare: Principles and Methods*. New York: Wiley, 1959. xii+384 p. \$5.50.** Here is a veritable encyclopedia of child welfare, dealing with the subject in all its facets—its problems and the various approaches to solution, characteristics of the children and families in need of help, the agencies that offer aid, etc. Indeed, if any aspect has been omitted, at least by mention, we do not know what it might be. But therein lies the fault that some may find with the book, that it is too sketchy and contains little coverage in depth; for that, however, the reader can look to the numerous references with which the footnotes are liberally sprinkled. The first half of the book is devoted to a history of child welfare, beginning with our English and colonial heritage, which had its own faint and frequently harsh beginning in the 16th and 17th centuries and even earlier. With the 19th century, we begin to see the birth of modern social concepts and we note how some earlier concepts, particularly those involving unsavory aspects of institutional care, began to fall into wise discard. The early 20th century brought many overwhelming developments, among them the recognition and growth of social work as a profession, the great foundations, the Children's Bureau, the juvenile court movement, the White House Conference (and yet the gaps that remain to be filled are so many). The harrowing years of the depression, the impact of World War II, and the contemporary emergence of a solid body of principles and activities are vividly described. The second half of the volume is divided into two portions. The first of these provides a description of the types of children in need of special protection—the child with physical handicaps, the child with intellectual, emotional, and social handicaps, and the child in need of judicial protection. Etiology, types, relationships, methods of treatment, and education are outlined for many specific groups. The second part deals with services, governmental and private, that seek to give aid to children, those who have special needs and those who require out-of-home care. "The new emphasis in this decade is upon the careful diagnosis of a child's needs and the selection of the placement facility best equipped to meet these needs." Newcomers especially will find this an extremely useful book, to be read through first and to be employed thereafter as a ready and quick reference and refresher. —I. Altman.

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- BANDURA, ALBERT, & WALTERS, RICHARD H. **Adolescent Aggression.** New York: Ronald, 1960. xii+475 p. \$7.50.
- BERKOWITZ, PEARL H., & ROTHMAN, ESTHER P. **The Disturbed Child.** New York: New York Univer. Press, 1960. vii+204 p. \$4.00.
- BREDEMEIER, HARRY C., & TOBY, JACKSON. **Social Problems in America.** New York: Wiley, 1960. xvi+510 p. \$6.75.
- ERIKSON, ERIK H. **Identity and the Life Cycle.** New York: International Universities Press, 1959. v+171 p. \$3.00.
- FALKNER, FRANK. (Ed.) **Modern Problems in Pediatrics.** Vol. 5. Basel, Switzerland: S. Karger, 1960. x+237 p. sFr. 50.-
- FARNSWORTH, PAUL R., & McNEMAR, QUINN. (Eds.) **Annual Review of Psychology.** Vol. 11. Palo Alto, Calif.: Annual Reviews, 1960. ix+544 p. \$7.00.
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- GALLAGHER, J. ROSWELL. **Medical Care of the Adolescent.** New York: Appleton-Century-Crofts, 1960. xii+369 p. \$10.00.
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- KENKEL, WILLIAM F. **The Family in Perspective.** New York: Appleton-Century-Crofts, 1960. xiv+472 p. \$6.00.
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- McKINNEY, FRED. **Psychology of Personal Adjustment.** (3rd Ed.) New York: Wiley, 1960. xiii+490 p. \$6.50.
- MARSON, PHILIP. **A Teacher Speaks.** New York: David McKay, 1960. ix+230 p. \$3.95.
- MILLER, ELVENA. **Is Your Child Beginning to Stutter?** Danville, Ill.: Interstate, 1960. 20 p. \$ .50.
- MONROE, MARGARET E., & STEWART, JEAN. (Eds.) **Alcohol Education for the Layman. A Bibliography.** New Brunswick, N.J.: Rutgers Univer. Press, 1959. viii+166 p. \$5.00.

- MOWRER, O. HOBART. *Learning Theory and Behavior*. New York: Wiley, 1960. xii+555 p. \$6.95.
- NATCHEZ, GLADYS. *Personality Patterns and Oral Reading*. New York: New York Univer. Press, 1959. xi+98 p. \$2.50.
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